

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

~~cggatcttct ccttcttccc agttccagtc~~ acagtgaggg cgcattctcac cgggtggctg
480
atgacactga agaaaacett cgtccttgcc ccagctctg tgctgcggat catcgtcctc
540
atcgccagcc tctgtgtcct accctacctg ggggtgcacg gtgcgacctt gggcgtgggc
600
tccctectgg cgggctttgt gggagaatcc accatggctg ccatcgctgc gtgctatgtc
660
taccggaagc agaaaaagaa gatggagaat gagtcggcca cggaggggga agactctgcc
720
atgacagaca tgctccgac agaggaggtg acagacatcg tggaaatgag agaggagaat
780
gaataaggca cgggacgcca tgggcactgc agggacagtc agtcaggatg acacttcggc
840
atcatctctt cctctctcca tctattttg ttcctttttt ttgttttgt tttgtaagt
900
aaagaggcct tgatttaaag gtttcgtgc aattctctag catactgggt atgtcacac
960
tgacgggggg acctagtga tggcttttac tgttctatg taaaaacaaa cgaacaact
1020
gacttcatac cctgcctca cgaaaacca aaagacacag ctgcctcacg gttgacgtg
1080
tgtctctctc cctcggaaca tctctcttg gaaccaaagg actgcagctg tgccatcgcg
1140
cctcggtcac cctgcacagc agggcacaga ctctctgtc ccccttcac gctcttaaga
1200
atcaacaggt taaaactcgg ctctctttga tttgtctcc agtcacatgg cgtacaaa
1260
agatggagcc cgggtggcct cttaaatttc ccttcgcca cggagtctga aacctctac
1320
tccacacatg caggaggcgg gtggcacgct gcagcccgga gtccccgttc aactgagga
1380
acggagacct gtgaccacag caggctgaca gatggacaga atctccgta gaaaggttg
1440
gtttgaaatg ccccgggggc agcaaaactga catggttgaa tgatagcatt tcaactctgcg
1500
ttctcctaga tctgagcaag ctgtcagttc tcacccccac cgtgtatata catgagctaa
1560
cttttttaaa ttgtcacaaa agcgcattctc cagattccag accctgccgc atgacttttc
1620
ctgaaggctt gcttttccct cgcctttcct gaaggctgca ttagagcgag tcacatggag
1680
catcctaact ttgcatttta gtttttacag tgaactgaag ctttaagtaa gtctcatcca
1740
gcattctaat gccagggttg ttaggggtaa cttttgaagt agatatatta cctggttctg
1800
ctatccttag tcataactct gcggtacagg taattgagaa tgtactacgg tacttcctc
1860
ccacaccata cgataaagca agacatttta taacgatacc agagtcacta tgggtcctc
1920
cctgaaataa cgcattcgaa atccatgcag tgcagtatat ttttctaagt tttggaaagc
1980
aggtttttc ctttaaaaaa attatagaca cggttcacta aattgattta gtcagaatc
2040

ctagactgaa agaacctaaa caaaaaaata ttttaaagat ataaatatat gctgtatatg
 2100
 ttatgtaatt tattttaggc tataatacat ttctatttt cgcattttca ataaaatgtc
 2160
 tctaatacaa tacgggtgatt gcttgtgtgc tcaacatacc tgcagttgaa acgtattgta
 2220
 tcaatgaaca ttgtacctta ttggcagcag ttttataaag tccgtcattt gcatttgaat
 2280
 gtaaggctca gtaaatagaca gaactatttt tcattatggg taactgggga ataaatgggt
 2340
 cactggagta ggaatagaag tgcaagctgg aaaggcaaaa atgagaaaaga aaaaggcagg
 2400
 ccctttgtgt ctaccgtttt cagtgtgtgt tgatcatatt gttcctcaca gcaaaaaaga
 2460
 atgcaagggc ataatgtag ctgtgaacat gccagggttg cattcacatt cctgggtacc
 2520
 cagtgtgat ggggtgtgcc cacgtgggga catgtccttg gcgtgcttcc tcagagtggc
 2580
 ttttctcca ttaatacata tatgagtact gaagaattaa tttgcatagc tgctttgcag
 2640
 tggtttcaga ggcagatctg agaagattaa aaaaaaatct caatgtatca gcttttttta
 2700
 aaggacatta ctagaaaatt aaacagtatt ttttaacaaa aaaaaaaaa
 2748

<210> 5896

<211> 261

<212> PRT

<213> Homo sapiens

<400> 5896

Ala	Thr	Ile	Arg	Lys	Met	Leu	Ser	Phe	Trp	Trp	Pro	Leu	Xaa	Leu	Ile
1				5					10					15	
Leu	Ala	Thr	Gln	Arg	Ile	Ser	Arg	Pro	Ile	Val	Asn	Leu	Phe	Val	Ser
			20					25					30		
Arg	Asp	Leu	Gly	Gly	Ser	Ser	Ala	Ala	Thr	Glu	Ala	Val	Ala	Ile	Leu
		35					40					45			
Thr	Ala	Thr	Tyr	Pro	Val	Gly	His	Met	Pro	Tyr	Gly	Trp	Leu	Thr	Glu
	50					55					60				
Ile	Arg	Ala	Val	Tyr	Pro	Ala	Phe	Asp	Lys	Asn	Asn	Pro	Ser	Asn	Lys
65					70				75					80	
Leu	Val	Ser	Thr	Ser	Asn	Thr	Val	Thr	Ala	Ala	His	Ile	Lys	Lys	Phe
				85					90				95		
Thr	Phe	Val	Cys	Met	Ala	Leu	Ser	Leu	Thr	Leu	Cys	Phe	Val	Met	Phe
			100					105					110		
Trp	Thr	Pro	Asn	Val	Ser	Glu	Lys	Ile	Leu	Ile	Asp	Ile	Ile	Gly	Val
	115					120					125				
Asp	Phe	Ala	Phe	Ala	Glu	Leu	Cys	Val	Val	Pro	Leu	Arg	Ile	Phe	Ser
	130					135					140				
Phe	Phe	Pro	Val	Pro	Val	Thr	Val	Arg	Ala	His	Leu	Thr	Gly	Trp	Leu
145					150				155					160	
Met	Thr	Leu	Lys	Lys	Thr	Phe	Val	Leu	Ala	Pro	Ser	Ser	Val	Leu	Arg
			165					170					175		
Ile	Ile	Val	Leu	Ile	Ala	Ser	Leu	Val	Val	Leu	Pro	Tyr	Leu	Gly	Val

	180		185		190										
His	Gly	Ala	Thr	Leu	Gly	Val	Gly	Ser	Leu	Leu	Ala	Gly	Phe	Val	Gly
	195				200						205				
Glu	Ser	Thr	Met	Val	Ala	Ile	Ala	Ala	Cys	Tyr	Val	Tyr	Arg	Lys	Gln
	210				215						220				
Lys	Lys	Lys	Met	Glu	Asn	Glu	Ser	Ala	Thr	Glu	Gly	Glu	Asp	Ser	Ala
225				230						235				240	
Met	Thr	Asp	Met	Pro	Thr	Glu	Glu	Val	Thr	Asp	Ile	Val	Glu	Met	
			245					250					255		
Arg	Glu	Glu	Asn	Glu											
	260														

<210> 5897

<211> 1930

<212> DNA

<213> Homo sapiens

<400> 5897

```

ngcgccgata agaggcagca gttcgggaagc cggttcctga gagatccggc gcgcgtcttc
60
caccacaatg cctggtaatc actctgcccc ttgccccggc ctgtcgctga ccctctgtcc
120
cgccgcctcg gagcattccg aaaagcccct gaccgcccgc cagagtcaa gctgccctac
180
ccggccacga gtcaagctgc cctacccgag gcactctcca aggggagaga aactcctagg
240
ccagcgactc accctgcccc cagccaggac gtgaagcccc taagctgccc gtttgatttt
300
ctcagggaca atgtggagtg gtcggaagag caagccgcgg cggcggagag aaaagtccag
360
gagaacagta tccagcgggt gtgccaggag aaacaagttg attatgagat caatgcccac
420
aaatactgga atgacttcta caaaatccac gaaaatgggt ttttcaagga tagacattgg
480
ctttttaccg aattccctga gctggcacct agccaaaatc aaaatcattt gaaggactgg
540
ttcttgga acaagagtga agtatgtgaa ttagaagaca atgaggatgg acctggttta
600
ataatggaag aacagcaca gtgttcttcg aagagccttg aacataaaac acagacacct
660
cctgtggagg agaatgtaac tcagaaaatt agtgacctgg aaatttgtgc tgatgagttt
720
cctggatcct cagccaccta ccgaatactg gaggttggct gtggtgtggg aaacacagtc
780
tttccaattt tacaaacgaa caatgaccca ggactctttg tttattgctg tgatttttct
840
tccacagcta tagaactggg ccagacaaat tcagaatatg atccttctcg gtgttttgcc
900
tttgttcacg acctgtgtga tgaagagaag agttaccag tgcccaaggg cagtcttgat
960
attatcatc tcattttgt tctttcagca attgttccag acaagatgca gaaggctatc
1020
aacaggctga gcaggcttct gaaacctggg gggatggtag ttctgcgaga ttacggccgc
1080

```


tatgacatgg ctcagcttcg gtttaaaaaa ggtcagtgtc tatctggaaa tttctacgtg
 1140
 agaggtgatg gaaccagagt ttacttcttc acacaagagg aactggacac gcttttcacc
 1200
 actgctggac tggaaaaagt tcagaacctg gtggatcgcc gactgcaggt gaaccgagga
 1260
 aagcaactga caatgtaccg ggtttggatt cagtgcaa at actgcaagcc ccttctgtcc
 1320
 agcaccagct gagaggcacc tgctgccaac acgatgcaag cccattgtgt ttccgggctt
 1380
 ttttaaaaaa aaaattgtag cactgggcgt ggtgcatgcc tgtaatccca gccactcagg
 1440
 aggctgagggc ggggaggatc cattgagccc agcagtccaa cctgggcaaa atagtgaag
 1500
 accctgtatc tgaagtaat aataaaaaata aaagaatata aatgaggtct cgttgatgtt
 1560
 ggacaattca agaattcaga cttgaacctt aaacctagga aaagttactt tgtatcagga
 1620
 ttctaacaat tatgcttcat atttgtgaag tcctttaaaa cataattttc tcaagttctt
 1680
 tctttgagat ctcaatctgt cttagcattt tgtaactaat aactgaaatt ttattcaaag
 1740
 gaattgtaaa ccttaaacca ccaatttatt tccatgtgaa aaagtgttat atatgacaag
 1800
 tgttttttga ttgtaattgc gttaaatctt ttgagagtgt aaatgccggc aaagtttcgc
 1860
 tctttgtacc taggctggag tgcagtgggt cgatctcggc tcaactgcaac ctctgcctcc
 1920
 agggntcaag
 1930

<210> 5898

<211> 242

<212> PRT

<213> Homo sapiens

<400> 5898

Met	Glu	Glu	Gln	His	Lys	Cys	Ser	Ser	Lys	Ser	Leu	Glu	His	Lys	Thr
1				5					10					15	
Gln	Thr	Pro	Pro	Val	Glu	Glu	Asn	Val	Thr	Gln	Lys	Ile	Ser	Asp	Leu
		20						25					30		
Glu	Ile	Cys	Ala	Asp	Glu	Phe	Pro	Gly	Ser	Ser	Ala	Thr	Tyr	Arg	Ile
		35					40					45			
Leu	Glu	Val	Gly	Cys	Gly	Val	Gly	Asn	Thr	Val	Phe	Pro	Ile	Leu	Gln
		50				55					60				
Thr	Asn	Asn	Asp	Pro	Gly	Leu	Phe	Val	Tyr	Cys	Cys	Asp	Phe	Ser	Ser
65					70					75				80	
Thr	Ala	Ile	Glu	Leu	Val	Gln	Thr	Asn	Ser	Glu	Tyr	Asp	Pro	Ser	Arg
				85				90					95		
Cys	Phe	Ala	Phe	Val	His	Asp	Leu	Cys	Asp	Glu	Glu	Lys	Ser	Tyr	Pro
			100				105					110			
Val	Pro	Lys	Gly	Ser	Leu	Asp	Ile	Ile	Ile	Leu	Ile	Phe	Val	Leu	Ser
		115				120					125				
Ala	Ile	Val	Pro	Asp	Lys	Met	Gln	Lys	Ala	Ile	Asn	Arg	Leu	Ser	Arg

130	135	140
Leu Leu Lys Pro Gly Gly Met Val Leu Leu Arg Asp Tyr Gly Arg Tyr		
145	150	155
Asp Met Ala Gln Leu Arg Phe Lys Lys Gly Gln Cys Leu Ser Gly Asn		160
	165	170
Phe Tyr Val Arg Gly Asp Gly Thr Arg Val Tyr Phe Phe Thr Gln Glu		175
	180	185
Glu Leu Asp Thr Leu Phe Thr Thr Ala Gly Leu Glu Lys Val Gln Asn		190
	195	200
Leu Val Asp Arg Arg Leu Gln Val Asn Arg Gly Lys Gln Leu Thr Met		205
	210	215
Tyr Arg Val Trp Ile Gln Cys Lys Tyr Cys Lys Pro Leu Leu Ser Ser		220
225	230	235
Thr Ser		240

<210> 5899

<211> 1589

<212> DNA

<213> Homo sapiens

<400> 5899

```

nngctagcag cccgcatcgt ggacacaccc tgcaatgaga tgaacaccga caccttcctc
60
gaggagatta acaaagttag aaaggaactg gggatcatcc caaccatcat ccgggatgag
120
gaactgaaga cgagaggatt tggaggaatc tatgggggtg gcaaagccgc cctgcatccc
180
ccagccctgg ccgtcctcag ccacacccca gatggagcca cgcagaccat cgcttgggtg
240
ggcaaaggca tcgtctatga cactggaggc ctcagcatca aagggaagac taccatgccg
300
gggatgaagc gagactgcgg gggatgctgc gccgtcctgg gggccttcag agccgcaatc
360
aagcaggggt tcaaagacaa cctccacgct gtgttctgct tggctgagaa ctcggtgggg
420
cccaatgcga caaggccaga tgacatccac ctgctgtact cagggaagac ggtggaaatc
480
aacaacacgg atgccgaggg caggctgggtg ctggcagatg gcgtgtccta tgcttgcaag
540
gacctggggg ccgacatcat cctggacatg gccaccctga ccggggctca gggcattgcc
600
acagggaagt accacgccgc ggtgctcacc aacagcgtg agtgggaggc cgctgtgtg
660
aaggcgggca ggaagtgtgg ggacctgggtg caccgctgg tctactgccc cgagctgcac
720
ttcagcgagt tcacctcagc tgtggcggac atgaagaact cagtggcgga ccgagacaac
780
agccccagct cctgtgctgg cctcttcac cctcacaca tcggcttcga ctggcccgga
840
gtctgggtcc acctggacat tgctgcaccg gtgcatgctg gtgagcgagc cacaggcttc
900
ggtgtggccc tctgtgtggc gctcttcggc cgtgcctctg aggaccctct gctgaacctg
960

```

gtgtcccccac tgggctgtga ggtggatgtc gaggaggggg acctgggggag ggactccaag
 1020
 agacgcaggc ttgtgtgagc ctctgcctc ggccctgaca aacggggatc ttttacctca
 1080
 ctttgcaactg attaatTTta agcaattgaa agattgccct tcatatgggt tttggtttgt
 1140
 ctttctggtc gtcagcgtgg tggtggaaac agctgaagtt ttaggagaca gcttaggggt
 1200
 tgggtgcgggc cacggggagg ggaccgggaa gcgctggggc ttgtttctgt ttgttactta
 1260
 caggactgag acatcttctg taaactgcta ccctggggc cttctgcacc ccggggtgag
 1320
 gcctcctgcc tgcttgggtc cctgtcccag cccaggtcc tgtgcagggc acctgcgtgg
 1380
 ctgacagcca ggctcttact ccagccgggg ctgccagcgc atccagccag ccagccctg
 1440
 tgaaagatgg agctgacttg ctgcaggga cctgatttat agggcaagag aagtcacact
 1500
 ccggcctctc agaattcact tgaggttcaa ttaaatacag tcacaccgcc ccctcaaaaa
 1560
 aaaaaaaaaa aaaaaaaaca aaaaaaaaaa
 1589

<210> 5900

<211> 345

<212> PRT

<213> Homo sapiens

<400> 5900

Xaa	Leu	Ala	Ala	Arg	Ile	Val	Asp	Thr	Pro	Cys	Asn	Glu	Met	Asn	Thr
1				5					10					15	
Asp	Thr	Phe	Leu	Glu	Glu	Ile	Asn	Lys	Val	Gly	Lys	Glu	Leu	Gly	Ile
			20					25						30	
Ile	Pro	Thr	Ile	Ile	Arg	Asp	Glu	Glu	Leu	Lys	Thr	Arg	Gly	Phe	Gly
		35					40					45			
Gly	Ile	Tyr	Gly	Val	Gly	Lys	Ala	Ala	Leu	His	Pro	Pro	Ala	Leu	Ala
		50				55					60				
Val	Leu	Ser	His	Thr	Pro	Asp	Gly	Ala	Thr	Gln	Thr	Ile	Ala	Trp	Val
					70				75					80	
Gly	Lys	Gly	Ile	Val	Tyr	Asp	Thr	Gly	Gly	Leu	Ser	Ile	Lys	Gly	Lys
			85					90						95	
Thr	Thr	Met	Pro	Gly	Met	Lys	Arg	Asp	Cys	Gly	Gly	Ala	Ala	Ala	Val
			100					105						110	
Leu	Gly	Ala	Phe	Arg	Ala	Ala	Ile	Lys	Gln	Gly	Phe	Lys	Asp	Asn	Leu
		115					120					125			
His	Ala	Val	Phe	Cys	Leu	Ala	Glu	Asn	Ser	Val	Gly	Pro	Asn	Ala	Thr
		130				135					140				
Arg	Pro	Asp	Asp	Ile	His	Leu	Leu	Tyr	Ser	Gly	Lys	Thr	Val	Glu	Ile
				150						155				160	
Asn	Asn	Thr	Asp	Ala	Glu	Gly	Arg	Leu	Val	Leu	Ala	Asp	Gly	Val	Ser
			165					170						175	
Tyr	Ala	Cys	Lys	Asp	Leu	Gly	Ala	Asp	Ile	Ile	Leu	Asp	Met	Ala	Thr
			180					185					190		
Leu	Thr	Gly	Ala	Gln	Gly	Ile	Ala	Thr	Gly	Lys	Tyr	His	Ala	Ala	Val

```

      195              200              205
Leu Thr Asn Ser Ala Glu Trp Glu Ala Ala Cys Val Lys Ala Gly Arg
  210              215              220
Lys Cys Gly Asp Leu Val His Pro Leu Val Tyr Cys Pro Glu Leu His
  225              230              235              240
Phe Ser Glu Phe Thr Ser Ala Val Ala Asp Met Lys Asn Ser Val Ala
      245              250              255
Asp Arg Asp Asn Ser Pro Ser Ser Cys Ala Gly Leu Phe Ile Ala Ser
      260              265              270
His Ile Gly Phe Asp Trp Pro Gly Val Trp Val His Leu Asp Ile Ala
      275              280              285
Ala Pro Val His Ala Gly Glu Arg Ala Thr Gly Phe Gly Val Ala Leu
      290              295              300
Leu Leu Ala Leu Phe Gly Arg Ala Ser Glu Asp Pro Leu Leu Asn Leu
  305              310              315              320
Val Ser Pro Leu Gly Cys Glu Val Asp Val Glu Glu Gly Asp Leu Gly
      325              330              335
Arg Asp Ser Lys Arg Arg Arg Leu Val
      340              345

```

<210> 5901

<211> 984

<212> DNA

<213> Homo sapiens

<400> 5901

```

ncggccgcgcg cagccatgac cgtggagttc gaggagtgcg tcaaggactc cccgcgcttc
60
agggcgacca ttgacgaggt ggagacggac gtggtggaga ttgaggccaa actggacaag
120
ctggtgaagc tgtgcagtgg catggtggaa gccggttaagg cctacgtcag caccagcagg
180
cttttcgtga gcggcgctcc cgacctgtcc cagcagtgcc agggcgacac cgtcatctcg
240
gaatgtctgc agaggttcgc tgacagccta caggaggtgg tgaactacca catgatcctg
300
tttgaccagg cccagaggtc cgtgcggcag cagctccaga gctttgtcaa agaggatgtg
360
cggaagtcca aggagacaaa gaagcagttt gacaagggtc gggaggacct ggagctgtcc
420
ctggtgagga acgcccaggc cccgaggcac cgccccacg aggtggagga agccaccggg
480
gcctcacc caccaggaa gtgcttcgc cacctggcac tggactatgt gctccagatc
540
aatgttctgc agccaagaa gaagtttgag atcctggact ctatgtgtgc cttcatgcac
600
gccagtgcca gcttcttcca gcagggtac agcctcctgc accagctgga cccctacatg
660
aagaagctgg cagccgagct ggaccagctg gtgatcgact ctgcggtgga aaagcgtgag
720
atggagcgaa agcacgccgc catccagcag cggaccctta gggacttctc ctacgatgag
780
tcgaaaagtgg agtttgacgt ggacgcgccc agtgggggtgg tgatggaggg ctacctcttc
840

```

aagagggcca gcaacncttt caagacatgg aaccggcgct gggtctccat tcagaacagc
 900
 cagctgggtct accagaagaa gctcaaggat gccctcacg tgggtgtgga tgacctccgc
 960
 ctgtgctctg tgaagccgtg tgag
 984

<210> 5902

<211> 328

<212> PRT

<213> Homo sapiens

<400> 5902

Xaa	Ala	Ala	Ala	Ala	Met	Thr	Val	Glu	Phe	Glu	Glu	Cys	Val	Lys	Asp
1				5					10					15	
Ser	Pro	Arg	Phe	Arg	Ala	Thr	Ile	Asp	Glu	Val	Glu	Thr	Asp	Val	Val
			20					25					30		
Glu	Ile	Glu	Ala	Lys	Leu	Asp	Lys	Leu	Val	Lys	Leu	Cys	Ser	Gly	Met
	35					40						45			
Val	Glu	Ala	Gly	Lys	Ala	Tyr	Val	Ser	Thr	Ser	Arg	Leu	Phe	Val	Ser
	50					55					60				
Gly	Val	Arg	Asp	Leu	Ser	Gln	Gln	Cys	Gln	Gly	Asp	Thr	Val	Ile	Ser
	65				70					75				80	
Glu	Cys	Leu	Gln	Arg	Phe	Ala	Asp	Ser	Leu	Gln	Glu	Val	Val	Asn	Tyr
			85					90						95	
His	Met	Ile	Leu	Phe	Asp	Gln	Ala	Gln	Arg	Ser	Val	Arg	Gln	Gln	Leu
		100						105						110	
Gln	Ser	Phe	Val	Lys	Glu	Asp	Val	Arg	Lys	Phe	Lys	Glu	Thr	Lys	Lys
		115					120						125		
Gln	Phe	Asp	Lys	Val	Arg	Glu	Asp	Leu	Glu	Leu	Ser	Leu	Val	Arg	Asn
	130					135					140				
Ala	Gln	Ala	Pro	Arg	His	Arg	Pro	His	Glu	Val	Glu	Glu	Ala	Thr	Gly
	145				150					155					160
Ala	Leu	Thr	Leu	Thr	Arg	Lys	Cys	Phe	Arg	His	Leu	Ala	Leu	Asp	Tyr
			165					170						175	
Val	Leu	Gln	Ile	Asn	Val	Leu	Gln	Ala	Lys	Lys	Lys	Phe	Glu	Ile	Leu
		180						185						190	
Asp	Ser	Met	Leu	Ser	Phe	Met	His	Ala	Gln	Ser	Ser	Phe	Phe	Gln	Gln
		195					200						205		
Gly	Tyr	Ser	Leu	Leu	His	Gln	Leu	Asp	Pro	Tyr	Met	Lys	Lys	Leu	Ala
	210					215					220				
Ala	Glu	Leu	Asp	Gln	Leu	Val	Ile	Asp	Ser	Ala	Val	Glu	Lys	Arg	Glu
	225				230					235					240
Met	Glu	Arg	Lys	His	Ala	Ala	Ile	Gln	Gln	Arg	Thr	Leu	Arg	Asp	Phe
			245						250					255	
Ser	Tyr	Asp	Glu	Ser	Lys	Val	Glu	Phe	Asp	Val	Asp	Ala	Pro	Ser	Gly
		260						265					270		
Val	Val	Met	Glu	Gly	Tyr	Leu	Phe	Lys	Arg	Ala	Ser	Asn	Xaa	Phe	Lys
		275						280					285		
Thr	Trp	Asn	Arg	Arg	Trp	Phe	Ser	Ile	Gln	Asn	Ser	Gln	Leu	Val	Tyr
	290					295					300				
Gln	Lys	Lys	Leu	Lys	Asp	Ala	Leu	Thr	Val	Val	Val	Asp	Asp	Leu	Arg
	305				310					315					320
Leu	Cys	Ser	Val	Lys	Pro	Cys	Glu								

325

<210> 5903
<211> 3734
<212> DNA
<213> Homo sapiens

<400> 5903
ctctgggctc caaggtcacg ggaggccagc ctcccttctc cccagctgcc tcctcctggc
60
aggggacctc tggcacacgc tccatgcccg cctgcccctc cagatctgtc cccaagccaa
120
gcaggggacc tcacttaatc ccaattatgt aatctgcaat ttaaacagtt ggcccatgag
180
gaggcgcttg gagccacgcc caggagtggg ggcaaaagga cccagctggg tcagggctga
240
caaaactaggc ttggcctctt gcctatagtg gccaccactc ctcaagcccc agccagcacg
300
atgagcggca gagtggcgca tctgagcccc aggcagaagg aggcattggc caagtttcgg
360
gagaatgtcc aggatgtgct gccggccctg ccgaatccag atgactatct tctcctgcgt
420
tggctccgag ccagaagctt cgacctgcag aagtcggagg ccatgtctcg gaagcatgtg
480
gagttccgaa agcaaaagga cattgacaac atcattagct ggcagcctcc agagggtgatc
540
caacagtatc tgtcaggggg tatgtgtggc tatgacctgg atggctgccc agtctggtac
600
gacataattg gacctctgga tgccaagggc ctctgtctgt cagcctccaa gcaggatatg
660
atccggaaag gcatcaaagt ctgtgagctg ctgttgcatg agtgtgagct gcagactcag
720
aagctgggca ggaagatcga gatggcgctg atggtgtttg acatggaggg gctgagcctg
780
aaacacctgt ggaagccagc tgtggaggtc taccagcagt tttttagcat cctggaagca
840
aattatcctg agaccctgaa gaatttaatt gttattcgag ccccaaaaact gttcccatg
900
gccttcaact tggtaagtc gttcatgagt gaggacactc gtaagaagat catggtcctg
960
ggagcaaat ggaaggaggt tttactgaaa catatcagcc ctgaccaggt gcctgtggag
1020
tatgggggca ccatgactga cctgatgga aacccaagt gcaaatccaa gatcaactac
1080
gggggtgaca tccccaggaa gtattatgtg cgagaccagg tgaaacagca gtatgaacac
1140
agcgtgcaga tttccctggc ctctcccaa caagtggagt atgagatcct cttccctggc
1200
tgtgtctca ggtggcagtt tctgtgagat ggagcggatg ttggttttgg gattttcctg
1260
aagaccaaga tgggagagag gcagcgggca ggggagatga cagagggtgct gccaaccag
1320
aggtacaact cccacctggt ccctgaagat gggaccctca cctgcagtga tcctggcatc
1380

5075

tatgtcctgc ggtttgacaa cacctacagc ttcattcatg ccaagaaggt caatttcact
1440
gtggaggtcc tgcttcaga caaagcctca gaagagaaga tgaaacagct gggggcaggg
1500
accccgaaat aacaccttct cctatagcag gcctggcccc ctcagtgtct ccctgtcaat
1560
ttctaccctc tgtagcagtc attttcgcac aacctgaag cccaaagaaa ctgggctgga
1620
ggacagacct caggagcttt catttcagtt aggcagagga agagcgactg cagtgggtct
1680
ccgtgtctat caaataccta aggagtcccc aggagctggc tggccatcgt gataggatct
1740
gtctgtcctg taaactgtgc caacttcacc tgtccagga cagcgaagct gggggtggcg
1800
gggggcatgt accacaggtg ggcagcaggg aaaaaatta gaaaagggtg aaagattggg
1860
acttaacact tcagggaagt cagctgccgg ggagaaactt gtcctaaat gaacacataa
1920
gtttagatcg caatgaggag tagcagggtg gctggttgc agagttacgg tggggatcag
1980
aaactcttcc aaacatttta gactgagggc tggggtagct tttggctttt cccaggtctc
2040
aggaggtggc ctgagtcagc acacatcttc ccactcggta gacaggctgg cctctccctc
2100
actttgagac tttggcaact cctggggcac acggcctgcc tctttgatta ctaatgattg
2160
tcagtgactc agagcttctt gggacttcgg gtaccacccc gctgttctcc atgcaaaaaa
2220
agcggcaggg aaatgaccca cagggatcgc agctgcaggg agggccaggg aggttggggg
2280
tgggagtga tgcataaagc agatcgtcca gtgccctttt cagtgtacc ggctctcac
2340
caagcagtc tccatgtgag caaccccgag acaaaaatgc taagtgggat caagagagca
2400
gcactcggag aggggtgttg ccagtctgag tgtcccgagg tgcccgcaa cccgcttctc
2460
gactgacctg agcaaggtct tactaagcag tcccatctct gtgggaggca tgcaacgcgt
2520
gcagggagtt caggtgccgg tcggcgtagc caggcctgga ggccccccag gcaggaggcc
2580
gccccaaagg ggggcggcg tctcgcagac taggggctgg gggcgccac agacggcctc
2640
gaaaccacag cccttaccac aatcccacga gccccgcaa cgaaccacag gtgctgggct
2700
ttagagaaca tgggaaggcg gccccagacc tggcggaac gcctttccct cagagccagg
2760
ccccggcccc gtctgggaag ctcattctgc gaagctgagg gagctcaggg caaaggccag
2820
gctagcgcg accggaagg ggcgaggctg cacgggcctc tgccagaacg ctcaagacat
2880
ccggcctgg gtttacaacg ctgttaggaa aattaaccaa tgaataaagc aacgttcagt
2940
gcgcaggag tgaaattcaa tgcccacgc taggtctctc gctgcctctc actcaagagg
3000

cccaaactca gacggcggtca gggacccgga cccagcagcc gtttcacgcc aatagatagg
 3060
 gcgcattgcgc agaaatcctc ctccggtctc tagcgtgagc tttcccaagg ggccacgccc
 3120
 agcttgccct ctgattgggtc cagctgggtgg gttgtcttcc gccatctttg atcagggcac
 3180
 taaggatgct cccgacggcc ttcacagtga cggcggagac cctgccccgc cagctgctca
 3240
 gtacgtgccg cgtagcccgt gcgagccaag tgtgagtccg ggcgagcgcc tgcggagcta
 3300
 gcactggggc cagaatgaga gggaggcgga ggagcagcga tcacgtgggt ttagggactg
 3360
 tctaataatt ccacgccagc attgccgggtg tttcaggggg tggaaccgc tgcgttcccc
 3420
 atcaactttt ctcccaccca ccaccctccc caacctacaa gccagctca gcttgaggta
 3480
 actgctgacc ggactgtcct atacagccct acaagacaga ggcgcctagg gctgaaagcg
 3540
 ggggcccctc tagggagcca gcgggggcct caatagttac tcattttctc tacctttgat
 3600
 gaaaaataga gctaattctt aataaggcct accgggtatc acgcaaaaac cctgtgctta
 3660
 ctattatact ttgggttggt gcaaagatta aaggaaataa gccgtgcaaa gcgcttaaaa
 3720
 aaaaaaaaaa aaaa
 3734

<210> 5904

<211> 308

<212> PRT

<213> Homo sapiens

<400> 5904

Met	Ser	Gly	Arg	Val	Gly	Asp	Leu	Ser	Pro	Arg	Gln	Lys	Glu	Ala	Leu
1				5					10					15	
Ala	Lys	Phe	Arg	Glu	Asn	Val	Gln	Asp	Val	Leu	Pro	Ala	Leu	Pro	Asn
			20					25					30		
Pro	Asp	Asp	Tyr	Phe	Leu	Leu	Arg	Trp	Leu	Arg	Ala	Arg	Ser	Phe	Asp
			35				40					45			
Leu	Gln	Lys	Ser	Glu	Ala	Met	Leu	Arg	Lys	His	Val	Glu	Phe	Arg	Lys
	50					55					60				
Gln	Lys	Asp	Ile	Asp	Asn	Ile	Ile	Ser	Trp	Gln	Pro	Pro	Glu	Val	Ile
65					70					75				80	
Gln	Gln	Tyr	Leu	Ser	Gly	Gly	Met	Cys	Gly	Tyr	Asp	Leu	Asp	Gly	Cys
				85					90					95	
Pro	Val	Trp	Tyr	Asp	Ile	Ile	Gly	Pro	Leu	Asp	Ala	Lys	Gly	Leu	Leu
			100					105					110		
Leu	Ser	Ala	Ser	Lys	Gln	Asp	Met	Ile	Arg	Lys	Gly	Ile	Lys	Val	Cys
		115					120					125			
Glu	Leu	Leu	Leu	His	Glu	Cys	Glu	Leu	Gln	Thr	Gln	Lys	Leu	Gly	Arg
		130				135					140				
Lys	Ile	Glu	Met	Ala	Leu	Met	Val	Phe	Asp	Met	Glu	Gly	Leu	Ser	Leu
145					150					155				160	
Lys	His	Leu	Trp	Lys	Pro	Ala	Val	Glu	Val	Tyr	Gln	Gln	Phe	Phe	Ser

[illegible]

```
<210> 5905
<211> 2280
<212> DNA
<213> Homo sapiens
```

<400>	5905					
nngttacttt	aaactttgta	tgttgttcaa	gaacagagta	tatcctgggt	aggatgtggt	
60						
catagctgat	gcattctccaa	aaattttttc	atgaaggcgg	ccagcttctg	aacgtcttca	
120						
attgtgacag	cattatacag	agaggcccg	atgcctccca	cagacacgta	gaatccttga	
180						
gaattatcaa	taatctcata	aattgtttga	gatttgatgg	agctaagctt	ctccatggcc	
240						
gcggcacctc	cattgttttt	aatccactcc	agaaccaagc	ccatgacgta	gatgctgaaa	
300						
catggaggcg	tgttgtacaa	ggagctgttt	ccagcctgca	ccttgtattc	caggaccgag	
360						
gggcactctc	ggaggggcaaa	ccccagcagg	tcatacggga	caatcaccac	ggtgacccca	
420						
gcagagccaa	cattcttctg	ggcaccagca	aaaatcacac	caaacttgga	aacatccact	
480						
ggcttgga	ggaagtttga	ggacatgtca	caaaccagta	ctgtctccct	gacatcggtt	
540						
ataaagtcaa	actccacacc	atgcaccgtc	tcatttgctc	aataatacac	gtaggaggca	
600						
tctgggttga	ggtttgactt	tatacccgat	gtcaaggagg	cagtactggt	ttgtgacatg	
660						
tcctcaaact	tcctgtccaa	gccagtggat	gtttccaagt	ttaggggtgat	ttttgctggt	
720						
gccagaaga	atgttggtct	tgctggggct	accgtggtga	ttgtccgtga	tgacctgctg	
780						
gggtttgccc	tccgagagtg	cccctcggtc	ctggaataca	aggtgcaggc	tggaaacagc	
840						

tccttgtaca acacgcctcc atgtttcagc atctacgtca tgggcttggt tctggagtgg
900
attaaaaaca atggaggtgc cgcggccatg gagaagetta gctccatcaa atctctaaca
960
atztatgaga ttattgataa ttctcaagga ttctacgttt gtccagtggg gccccaaat
1020
agaagcaaga tgaatatcc attccgcatt ggcaatgcc aaggagatga tgctttagaa
1080
aaaagatttc ttgataaagc tcttgaactc aatatgttgt ccttgaaagg gcataggtct
1140
gtgggaggca tccgggcttc tctgtataat gctgtcacia ttgaagacgt tcagaagctg
1200
gccgccttca tgaaaaaatt tttggagatg catcagctat gaacacatcc taaccaggat
1260
atactctgtt cttgaacaac atacaaagt taaagtaact tggggatggc tacaaaaagt
1320
taacacagta tttttctcaa atgaacatgt ttattgcaga ttcttctttt ttgaaagaac
1380
aacagcaaaa catccacaac tctgtaaagc tgggtgggacc taatgtcacc ttaattctga
1440
cttgaactgg aagcatttta agaaatcttg ttgcttttct aacaaattcc cgcgtatttt
1500
gcctttgctg ctacttttct tagtttagatt tcaaacttgc ctgtggactt aataatgcaa
1560
gttgcgatta attatttctg gagtcatggg aacacacagc acagagggta ggggggacct
1620
ctaggtgctg aatctacaca tctgtggggg ctctctgggt cagcggctgt tgattcaagg
1680
tcaacattga ccattggagg agtgggttaa gagtgccagg cgaagggcaa actgtagatc
1740
gatctttatg ctgttattac aggagaagt acatacttta tatatgttta tattagcaag
1800
gtctgttttt aataccatat actttatatt tctatacatt tatatttcta ataatacagt
1860
tatcactgat atatgtagac acttttagaa tttattaaat ccttgacctt gtgcattata
1920
gcattccatt agcaagagt gtacccctc cccagtcttc gccttctctt ttttaagctg
1980
ttttatgaaa aagacctaga agttcttgat tcatttttac cattctttcc ataggtagaa
2040
gagaaagttg attggttggt tgtttttcaa ttatgccatt aaactaaaca tttctgttaa
2100
attacctat cctttgttct ctactgtttt ctttgtaatg tatgactacg agagtgatac
2160
tttgcgaaa agtctttccc ctattgttta tctattgtca gtattttatg ttgaatatgt
2220
aaagaacatt aaagtctaa aacatctaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2280

<210> 5906

<211> 215

<212> PRT

<213> Homo sapiens

<400> 5906

Glu Ala Ser Gly Leu Arg Phe Asp Phe Ile Pro Asp Val Lys Gly Ala
 1 5 10 15
 Val Leu Val Cys Asp Met Ser Ser Asn Phe Leu Ser Lys Pro Val Asp
 20 25 30
 Val Ser Lys Phe Arg Val Ile Phe Ala Gly Ala Gln Lys Asn Val Gly
 35 40 45
 Ser Ala Gly Val Thr Val Val Ile Val Arg Asp Asp Leu Leu Gly Phe
 50 55 60
 Ala Leu Arg Glu Cys Pro Ser Val Leu Glu Tyr Lys Val Gln Ala Gly
 65 70 75 80
 Asn Ser Ser Leu Tyr Asn Thr Pro Pro Cys Phe Ser Ile Tyr Val Met
 85 90 95
 Gly Leu Val Leu Glu Trp Ile Lys Asn Asn Gly Gly Ala Ala Met
 100 105 110
 Glu Lys Leu Ser Ser Ile Lys Ser Leu Thr Ile Tyr Glu Ile Ile Asp
 115 120 125
 Asn Ser Gln Gly Phe Tyr Val Cys Pro Val Glu Pro Gln Asn Arg Ser
 130 135 140
 Lys Met Asn Ile Pro Phe Arg Ile Gly Asn Ala Lys Gly Asp Asp Ala
 145 150 155 160
 Leu Glu Lys Arg Phe Leu Asp Lys Ala Leu Glu Leu Asn Met Leu Ser
 165 170 175
 Leu Lys Gly His Arg Ser Val Gly Gly Ile Arg Ala Ser Leu Tyr Asn
 180 185 190
 Ala Val Thr Ile Glu Asp Val Gln Lys Leu Ala Ala Phe Met Lys Lys
 195 200 205
 Phe Leu Glu Met His Gln Leu
 210 215

<210> 5907

<211> 1989

<212> DNA

<213> Homo sapiens

<400> 5907

nnattggcta aataaggtgt tatcagctgc ttgatataga gctgataaaa tcttcagcta
 60
 ggcatacttg aggccctgatt acagaagtga ccgtagtcca cccacacacc tgaaatttat
 120
 ttaagagacc aagctaggct cttcctggcc tttaggaaga ggactggcat ggagaaatat
 180
 gttcctcact agttctccca agccatggca cgtcccaaca aattcctcct ttggttttgc
 240
 tgctttgcct ggctgtgttt tctatttagc cttggttctc aggcctcttg gggagaagct
 300
 cagattgctg ctagtgetga gttggaatct ggggctatgc cttggtcctt gctgcagcat
 360
 atagatgaga gagacagagc tggcctcctt cccgcgcttt tcaaagttct atctgttggg
 420
 cgaggtgggt cacctaggct gcagccagac tccagagctt tgcactacat gaagaagctc
 480
 tataagacat atgctaccaa ggaagggatt cctaaatcca atagaagtca cctctacaac
 540

actgttcggc tcttcacccc ctgtaccgag cacaagcagg ctcttgagga ccaggtaaca
600
ggaatccttc catcagtggg actgctatct aacctggatc gcattactac cgttgaacac
660
ttactcaagt cagtcttgct gtacaatatc aacaactcag tttctttttc ctctgctgtc
720
aaatgtgtgt gcaatcctat gataaaggag ccaaagtctt ctgacaggac tctcggcaga
780
gctccatact catttacctt taactcacag tttgaatttg gaaagaaaca caaatggatt
840
cagattgatg tgaccagcct ccttcaacct ttagtggcct ccaacaagag aagtattcac
900
atgtctataa attttacttg catgaaagac cagctggagc atccttcagc acagaatggt
960
ttgtttaaca tgactctggt gtccccctca ctgatcttat atttgaatga cacaagtgtc
1020
caggcttata acagctggta ttcccttcac tataaaagga ggccttccca gggctcctgac
1080
caggagagaa gtctgtctgc ctatcctgtg ggagaagagg ctgctgagga tgggagatct
1140
tcccatcacc gtcaccgag aggtcaggaa actgtcagtt ctgaattgaa gaagcccttg
1200
ggcccagctt ccttcaatct gagtgaatac ttcagacaat ttcttcttcc ccaaatgag
1260
tgtgagctcc atgactttag acttagcttt agtcagctga agtgggacaa ctggattgtg
1320
gctccgcaca ggtacaaccc tcgatactgt aaaggggact gtccaagggc agttggacat
1380
cggtatggct ctccagttca caccatggta cagaacatca tctatgagaa gctggactcc
1440
tcagtgccaa gaccgtcatg tgtacctgcc aaatacagcc ccttgagtgt tttgaccatt
1500
gagcccgatg gctcaattgc ctataaagag tacgaagata tgatagctac aaagtgcacc
1560
tgtcgttaac aaatggctct cttaaaacct tgagcctatt tggcaaagta actactgtgt
1620
gcctatgtgt gccttcaaga gaaagcttca tatattaagt ctctaaatgt agcatatgtt
1680
atataaagag gagcctgtgt aggttagtac cttctatggc atctatcagg ataaagggat
1740
aacatcaatt gttgctacag agcctttttt tatttccaaa tttaaatgaa atataattat
1800
tgtggagAAC tttacatttt ttcccttgag tgattttttt tcttttcata ggagtcttat
1860
tcttgatagg gaaaaaacct taattagcat caatcctgga tggacttgca gctataaata
1920
ggcaattcag attgctgtag tcttaataga agaataaatt tactgtcaat ggcaaaaaaa
1980
aaaaaaaaa
1989

<210> 5908

<211> 454

<212> PRT

<213> Homo sapiens

<400> 5908

```

Met Ala Arg Pro Asn Lys Phe Leu Leu Trp Phe Cys Cys Phe Ala Trp
 1           5           10           15
Leu Cys Phe Pro Ile Ser Leu Gly Ser Gln Ala Ser Gly Gly Glu Ala
 20           25           30
Gln Ile Ala Ala Ser Ala Glu Leu Glu Ser Gly Ala Met Pro Trp Ser
 35           40           45
Leu Leu Gln His Ile Asp Glu Arg Asp Arg Ala Gly Leu Leu Pro Ala
 50           55           60
Leu Phe Lys Val Leu Ser Val Gly Arg Gly Gly Ser Pro Arg Leu Gln
 65           70           75           80
Pro Asp Ser Arg Ala Leu His Tyr Met Lys Lys Leu Tyr Lys Thr Tyr
 85           90           95
Ala Thr Lys Glu Gly Ile Pro Lys Ser Asn Arg Ser His Leu Tyr Asn
 100          105          110
Thr Val Arg Leu Phe Thr Pro Cys Thr Arg His Lys Gln Ala Pro Gly
 115          120          125
Asp Gln Val Thr Gly Ile Leu Pro Ser Val Glu Leu Leu Phe Asn Leu
 130          135          140
Asp Arg Ile Thr Thr Val Glu His Leu Leu Lys Ser Val Leu Leu Tyr
 145          150          155          160
Asn Ile Asn Asn Ser Val Ser Phe Ser Ser Ala Val Lys Cys Val Cys
 165          170          175
Asn Leu Met Ile Lys Glu Pro Lys Ser Ser Ser Arg Thr Leu Gly Arg
 180          185          190
Ala Pro Tyr Ser Phe Thr Phe Asn Ser Gln Phe Glu Phe Gly Lys Lys
 195          200          205
His Lys Trp Ile Gln Ile Asp Val Thr Ser Leu Leu Gln Pro Leu Val
 210          215          220
Ala Ser Asn Lys Arg Ser Ile His Met Ser Ile Asn Phe Thr Cys Met
 225          230          235          240
Lys Asp Gln Leu Glu His Pro Ser Ala Gln Asn Gly Leu Phe Asn Met
 245          250          255
Thr Leu Val Ser Pro Ser Leu Ile Leu Tyr Leu Asn Asp Thr Ser Ala
 260          265          270
Gln Ala Tyr His Ser Trp Tyr Ser Leu His Tyr Lys Arg Arg Pro Ser
 275          280          285
Gln Gly Pro Asp Gln Glu Arg Ser Leu Ser Ala Tyr Pro Val Gly Glu
 290          295          300
Glu Ala Ala Glu Asp Gly Arg Ser Ser His His Arg His Arg Arg Gly
 305          310          315          320
Gln Glu Thr Val Ser Ser Glu Leu Lys Lys Pro Leu Gly Pro Ala Ser
 325          330          335
Phe Asn Leu Ser Glu Tyr Phe Arg Gln Phe Leu Leu Pro Gln Asn Glu
 340          345          350
Cys Glu Leu His Asp Phe Arg Leu Ser Phe Ser Gln Leu Lys Trp Asp
 355          360          365
Asn Trp Ile Val Ala Pro His Arg Tyr Asn Pro Arg Tyr Cys Lys Gly
 370          375          380
Asp Cys Pro Arg Ala Val Gly His Arg Tyr Gly Ser Pro Val His Thr
 385          390          395          400
Met Val Gln Asn Ile Ile Tyr Glu Lys Leu Asp Ser Ser Val Pro Arg

```

405 410 415
 Pro Ser Cys Val Pro Ala Lys Tyr Ser Pro Leu Ser Val Leu Thr Ile
 420 425 430
 Glu Pro Asp Gly Ser Ile Ala Tyr Lys Glu Tyr Glu Asp Met Ile Ala
 435 440 445
 Thr Lys Cys Thr Cys Arg
 450

<210> 5909

<211> 4343

<212> DNA

<213> Homo sapiens

<400> 5909

nncggccgcg ggagggtcct tgtggcgccg gccggcgggg tcctgcgtgg agagtgggac
 60
 gcaacgccga gaccgcgagc agaggctgcg cacagccgga tccggcactc agcgaccgga
 120
 cccaaggatc cgccggggaa caagccacag gagagcgact caggaacaag tgtgggagag
 180
 gaagcggcgg cgccggcgcc gggcccgggg gtggtgacag cagggtctgag gttgcatcat
 240
 aaatacaaag gactgaagtt ataaaagaga aaagagaagt ttgctgctaa aatgaatctg
 300
 agcaatatgg aatattttgt gccacacaca aaaagggtact gaagatttac cccccaaaaa
 360
 aaattgtcaa tgagaaataa agctaactga tatcaaaaag cagagcctgc tctactggcc
 420
 atcatgcgta aaggggtgct gaaggacca gagattgccg atctattcta caaagatgat
 480
 cctgaggaac tttttattgg tttgcatgaa attggacatg gaagttttgg agcagtttat
 540
 tttgctacaa atgctcacac cagtgaggtg gtggcaatta agaagatgtc ctatagtggg
 600
 aagcagaccc atgagaaatg gcaagatatt ctttaaggag ttaaattttt acgacaattg
 660
 aagcatccta atactattga gtacaaaggc tgttacttga aagaacacac tgcttggttg
 720
 gtgatggaat attgcttagg ctcagcctct gatttattag aagttcataa aaaaccactt
 780
 caggaagtgg agatcgctgc cattactcat ggagccttgc atggactagc ctacctacat
 840
 tctcatgcat tgattcatag ggatattaaa gcaggaaata ttcttctaac agagccaggt
 900
 caggtaaaac tagctgattt tggatctgct tcaatggctt ctcttgccaa ctcttcgtg
 960
 ggcacacctt actggatggc tccagagggtg atcttagcta tggatgaagg acagtatgat
 1020
 gggaaagtgg atatttggtc acttggcatc acttgatttg aattggcgga acggaagccg
 1080
 ccccttttca acatgaatgc aatgagtgc ttatatcaca ttgcccagaa tgactcccca
 1140
 acgttacagt ctaatgaatg gacagactcc tttaggagat ttgttgatta ctgcttgag
 1200

aaaatacctc aggaaaggcc aacatcagca gaactattaa ggcatacactt tgttcgacga
1260
gaccggccac tacgtgtcct cattgacctc atacagagga caaaagatgc agttcgtgag
1320
ctagataacc tacagtaccg aaaaatgaaa aaaatacttt tccaagagac acggaatgga
1380
cccttgaatg agtcacagga ggatgaggaa gacagtgaac atggaaccag cctgaacagg
1440
gaaatggaca gcctgggcag caaccattcc attccaagca tgtccgtgag cacaggcagc
1500
cagagcagca gtgtgaacag catgcaggaa gtcatggacg agagcagttc cgaacttgct
1560
atgatgcagc atgacgaaag cacaatcaat tccagctcct ccgtcgtgca taagaaagat
1620
catgtattca taagggatga ggcgggccac ggcgatccca ggctgagcc gcggcctacc
1680
cagtcagttc agagccaggc cctccactac cggaacagag agcgctttgc cacgatcaaa
1740
tcagcatctt tggttacacg acagatccat gagcatgagc aggagaacga gttgcgggaa
1800
cagatgtcag gttataagcg gatgcggcgc cagcaccaga agcagctgat cgccctggag
1860
aacaagctga aggctgagat ggacgagcac cgcctcaagc tacagaagga ggtggagacg
1920
catgccaaac actcgtccat cgagctggag aagctggcca agaagcaagt ggctatcata
1980
gaaaaggagg caaaggtagc tgcagcagat gagaagaagt tccagcaaca gatcttggcc
2040
cagcagaaga aagatttgac aactttctta gaaagtcaga agaagcagta taagatttgt
2100
aaggaaaaaa taaaagagga aatgaatgag gaccatagca cacccaagaa agagaagcaa
2160
gagcggatct tcaaacataa agagaacttg caacacacac aggtgaaga ggaagcccac
2220
cttctcactt caacaggaga ctggactacg accaaaaatt gtcgtttctt caagcggaaa
2280
ataatgatca agcggcacga ggtggagcag cagaacattc gggaggaact aaataaaaag
2340
aggaccatga aggagatgga gcatgccatg ctaatccggc acgacgagtc caccgagag
2400
ctagagtaca ggcagctgca cacgttacag aagctacgga tggatctgat ccgtttacag
2460
caccagacgg aactggaaaa ccagctggag tacaataaga ggcgagaaag agaactgcac
2520
agaaagcatg tcatggaact tcggcaacag ccaaaaaact taaaggccat ggaaatgcaa
2580
attaataaac agtttcagga cacttgcaaa gtacagacca aacagtataa agcactcaag
2640
aatcaccagt tggaaagttac tccaaagaat gagcacaaaa caatcttaaa gacactgaaa
2700
gatgagcaga caagaaaaact tgccattttg gcagagcagt atgaacagag tataaatgaa
2760
atgatggcct ctcaagcggt acggctagat gaggtcaag aagcagaatg ccaggccttg
2820

aggctacagc tccagcagga aatggagctg ctcaacgcct accagagcaa aatcaagatg
2880
caaacagagg cacaacatga acgtgagctc cagaagctag agcagagagt gtctctgcgc
2940
agagcacacc ttgagcagaa gattgaagag gagctggctg cccttcagaa ggaacgcagc
3000
gagagaataa agaacctatt ggaaaggcaa gagcgagaga ttgaaacttt tgacatggag
3060
agcctcagaa tgggatttgg gaatttgggt acattagatt ttcctaagga ggactacaga
3120
tgagattaaa ttttttgcca tttaaaaaa aaaaaaaaaa aaagaaaaca aaaaaaatt
3180
cagacctgc aaaaccacat tccccathtt aacggggcgt gctctcactc tctctctctc
3240
ttactcttac tgacatcgtg tcggactagt gcctgtttat tcttactcca tcaggggccc
3300
ccttctctcc cccgtgtcaa ctttcagtgc tggccaaaac ctggccgtct cttctattca
3360
cagtacagc cacagtattg atgtgattca aaatgtttca gtgaaaactt tggagacagt
3420
tttaacaaaa ccaataaacc aacaacaaaa aaagtggatg tatattgctt taagcaatca
3480
ctcattacca ccaatctgtg aaagtaaagc aaaaaataat aataataaat gccaaagggg
3540
agagagacac aatatccgca gccttacacc ttaactagct gctgcattat tttattttat
3600
tttatttttt tgggtatttat tcatcaggaa taataaaaaa aaagttttat taaagattga
3660
aaatttgata cattttacag aaactaattg tgatgtacat atcagtgggtg acatattatt
3720
acttttttgg ggacgggggg tgggtggggt gaagagatct tgtgattttt aagaacctgc
3780
tggcaagagt ttaactgtc ttcagcatat tctgattgta tcataatcat tttctgctgt
3840
tgcagaggat gtgaatacac ttaaggagct cacagaatcc cagtagcaca aattgggctt
3900
tggcaaatcg tgtattttgt gtatagaagg aatttaagga gaggtattac ttattttcat
3960
attgtatttt aactgtttct ctgatcaaat ttttttactt cctcctctg ttcctcccca
4020
cctccctcct ttccagttc agtatttggg gttcaacact gtctctcaat cagatcatct
4080
tgatcttttt ctttatctcc cttccccttc ctaagtccca tttcttggtc ataaatattg
4140
cattattcac actttcaaac tgtgtatttt cttacaataa aaaatgatga aaaaaaaaaa
4200
ggctttactt cttttgcatg cactttaaaa acaaaacaaa acatttttca ggttccaagg
4260
aagagcatga taactgtcag agcttttaat tataatttga aataaaaagt ttcacacaa
4320
aaaaaaaaa aaaaaaaaaa aaa
4343

<210> 5910

<211> 899
 <212> PRT
 <213> Homo sapiens

<400> 5910

```

Met Arg Lys Gly Val Leu Lys Asp Pro Glu Ile Ala Asp Leu Phe Tyr
 1           5           10           15
Lys Asp Asp Pro Glu Glu Leu Phe Ile Gly Leu His Glu Ile Gly His
 20           25           30
Gly Ser Phe Gly Ala Val Tyr Phe Ala Thr Asn Ala His Thr Ser Glu
 35           40           45
Val Val Ala Ile Lys Lys Met Ser Tyr Ser Gly Lys Gln Thr His Glu
 50           55           60
Lys Trp Gln Asp Ile Leu Lys Glu Val Lys Phe Leu Arg Gln Leu Lys
 65           70           75           80
His Pro Asn Thr Ile Glu Tyr Lys Gly Cys Tyr Leu Lys Glu His Thr
 85           90           95
Ala Trp Leu Val Met Glu Tyr Cys Leu Gly Ser Ala Ser Asp Leu Leu
 100          105          110
Glu Val His Lys Lys Pro Leu Gln Glu Val Glu Ile Ala Ala Ile Thr
 115          120          125
His Gly Ala Leu His Gly Leu Ala Tyr Leu His Ser His Ala Leu Ile
 130          135          140
His Arg Asp Ile Lys Ala Gly Asn Ile Leu Leu Thr Glu Pro Gly Gln
 145          150          155          160
Val Lys Leu Ala Asp Phe Gly Ser Ala Ser Met Ala Ser Pro Ala Asn
 165          170          175
Ser Phe Val Gly Thr Pro Tyr Trp Met Ala Pro Glu Val Ile Leu Ala
 180          185          190
Met Asp Glu Gly Gln Tyr Asp Gly Lys Val Asp Ile Trp Ser Leu Gly
 195          200          205
Ile Thr Cys Ile Glu Leu Ala Glu Arg Lys Pro Pro Leu Phe Asn Met
 210          215          220
Asn Ala Met Ser Ala Leu Tyr His Ile Ala Gln Asn Asp Ser Pro Thr
 225          230          235          240
Leu Gln Ser Asn Glu Trp Thr Asp Ser Phe Arg Arg Phe Val Asp Tyr
 245          250          255
Cys Leu Gln Lys Ile Pro Gln Glu Arg Pro Thr Ser Ala Glu Leu Leu
 260          265          270
Arg His Asp Phe Val Arg Arg Asp Arg Pro Leu Arg Val Leu Ile Asp
 275          280          285
Leu Ile Gln Arg Thr Lys Asp Ala Val Arg Glu Leu Asp Asn Leu Gln
 290          295          300
Tyr Arg Lys Met Lys Lys Ile Leu Phe Gln Glu Thr Arg Asn Gly Pro
 305          310          315          320
Leu Asn Glu Ser Gln Glu Asp Glu Glu Asp Ser Glu His Gly Thr Ser
 325          330          335
Leu Asn Arg Glu Met Asp Ser Leu Gly Ser Asn His Ser Ile Pro Ser
 340          345          350
Met Ser Val Ser Thr Gly Ser Gln Ser Ser Ser Val Asn Ser Met Gln
 355          360          365
Glu Val Met Asp Glu Ser Ser Ser Glu Leu Val Met Met His Asp Asp
 370          375          380
Glu Ser Thr Ile Asn Ser Ser Ser Ser Val Val His Lys Lys Asp His

```

```

385          390          395          400
Val Phe Ile Arg Asp Glu Ala Gly His Gly Asp Pro Arg Pro Glu Pro
          405          410          415
Arg Pro Thr Gln Ser Val Gln Ser Gln Ala Leu His Tyr Arg Asn Arg
          420          425          430
Glu Arg Phe Ala Thr Ile Lys Ser Ala Ser Leu Val Thr Arg Gln Ile
          435          440          445
His Glu His Glu Gln Glu Asn Glu Leu Arg Glu Gln Met Ser Gly Tyr
          450          455          460
Lys Arg Met Arg Arg Gln His Gln Lys Gln Leu Ile Ala Leu Glu Asn
465          470          475          480
Lys Leu Lys Ala Glu Met Asp Glu His Arg Leu Lys Leu Gln Lys Glu
          485          490          495
Val Glu Thr His Ala Asn Asn Ser Ser Ile Glu Leu Glu Lys Leu Ala
          500          505          510
Lys Lys Gln Val Ala Ile Ile Glu Lys Glu Ala Lys Val Ala Ala Ala
          515          520          525
Asp Glu Lys Lys Phe Gln Gln Gln Ile Leu Ala Gln Gln Lys Lys Asp
530          535          540
Leu Thr Thr Phe Leu Glu Ser Gln Lys Lys Gln Tyr Lys Ile Cys Lys
545          550          555          560
Glu Lys Ile Lys Glu Glu Met Asn Glu Asp His Ser Thr Pro Lys Lys
          565          570          575
Glu Lys Gln Glu Arg Ile Phe Lys His Lys Glu Asn Leu Gln His Thr
          580          585          590
Gln Ala Glu Glu Glu Ala His Leu Leu Thr Ser Thr Gly Asp Trp Thr
          595          600          605
Thr Thr Lys Asn Cys Arg Phe Phe Lys Arg Lys Ile Met Ile Lys Arg
610          615          620
His Glu Val Glu Gln Gln Asn Ile Arg Glu Glu Leu Asn Lys Lys Arg
625          630          635          640
Thr Met Lys Glu Met Glu His Ala Met Leu Ile Arg His Asp Glu Ser
          645          650          655
Thr Arg Glu Leu Glu Tyr Arg Gln Leu His Thr Leu Gln Lys Leu Arg
          660          665          670
Met Asp Leu Ile Arg Leu Gln His Gln Thr Glu Leu Glu Asn Gln Leu
675          680          685
Glu Tyr Asn Lys Arg Arg Glu Arg Glu Leu His Arg Lys His Val Met
690          695          700
Glu Leu Arg Gln Gln Pro Lys Asn Leu Lys Ala Met Glu Met Gln Ile
705          710          715          720
Lys Lys Gln Phe Gln Asp Thr Cys Lys Val Gln Thr Lys Gln Tyr Lys
          725          730          735
Ala Leu Lys Asn His Gln Leu Glu Val Thr Pro Lys Asn Glu His Lys
          740          745          750
Thr Ile Leu Lys Thr Leu Lys Asp Glu Gln Thr Arg Lys Leu Ala Ile
          755          760          765
Leu Ala Glu Gln Tyr Glu Gln Ser Ile Asn Glu Met Met Ala Ser Gln
770          775          780
Ala Leu Arg Leu Asp Glu Ala Gln Glu Ala Glu Cys Gln Ala Leu Arg
785          790          795          800
Leu Gln Leu Gln Gln Glu Met Glu Leu Leu Asn Ala Tyr Gln Ser Lys
          805          810          815
Ile Lys Met Gln Thr Glu Ala Gln His Glu Arg Glu Leu Gln Lys Leu

```

```

      820      825      830
Glu Gln Arg Val Ser Leu Arg Arg Ala His Leu Glu Gln Lys Ile Glu
      835      840      845
Glu Glu Leu Ala Ala Leu Gln Lys Glu Arg Ser Glu Arg Ile Lys Asn
      850      855      860
Leu Leu Glu Arg Gln Glu Arg Glu Ile Glu Thr Phe Asp Met Glu Ser
865      870      875      880
Leu Arg Met Gly Phe Gly Asn Leu Val Thr Leu Asp Phe Pro Lys Glu
      885      890      895
Asp Tyr Arg

```

<210> 5911
 <211> 645
 <212> DNA
 <213> Homo sapiens

```

<400> 5911
nnaagtactt aagatggaaa gccagaaatc ccggtcttgt gcttcgctca cgctgggagc
60
tgtagaccgg agctgttccct attcggcaat cttggctctt ccgcagagga tctcattttg
120
cccgcagggtg gtactccagc aggtacttca agtccagctt cttcatcttc ccttctcaac
180
agacttcagc ttgatgatga tattgatggg gagactagag atctcttcgt tatagtcgat
240
gatcccaaga agcatgtgtg tacaatggag acttacatca cctataggat caccacaaa
300
agtactcggg tggagtttga cctgccagaa tattctgttc gtcgaagata ccaggatttt
360
gactgggttg ggagcaaact ggaagaatcc cagccactc atctcattcc ccctcttccc
420
gagaagtttg tggtaaaagg tgttgtggat cgtttttcag aagagtttgt ggagaccaga
480
agaaaagctt tggataaatt tctaaaaaga attacggacc atcctgtgct gtcttttcaat
540
gaacacttta atattttcct tactgctaag gacctgaacg cctacaagaa gcaagggata
600
gcattgctga ccagaatggg cgagtcagtc aagcacgtca cgcgt
645

```

<210> 5912
 <211> 211
 <212> PRT
 <213> Homo sapiens

```

<400> 5912
Asp Gly Lys Pro Glu Ile Pro Val Leu Cys Phe Ala His Ala Gly Ser
1      5      10      15
Cys Arg Pro Glu Leu Phe Leu Phe Gly Asn Leu Gly Ser Ser Ala Glu
20      25      30
Asp Leu Ile Leu Pro Asp Gly Gly Thr Pro Ala Gly Thr Ser Ser Pro
35      40      45
Ala Ser Ser Ser Ser Leu Leu Asn Arg Leu Gln Leu Asp Asp Asp Ile

```

50 55 60
 Asp Gly Glu Thr Arg Asp Leu Phe Val Ile Val Asp Asp Pro Lys Lys
 65 70 75 80
 His Val Cys Thr Met Glu Thr Tyr Ile Thr Tyr Arg Ile Thr Thr Lys
 85 90 95
 Ser Thr Arg Val Glu Phe Asp Leu Pro Glu Tyr Ser Val Arg Arg Arg
 100 105 110
 Tyr Gln Asp Phe Asp Trp Leu Arg Ser Lys Leu Glu Glu Ser Gln Pro
 115 120 125
 Thr His Leu Ile Pro Pro Leu Pro Glu Lys Phe Val Val Lys Gly Val
 130 135 140
 Val Asp Arg Phe Ser Glu Glu Phe Val Glu Thr Arg Arg Lys Ala Leu
 145 150 155 160
 Asp Lys Phe Leu Lys Arg Ile Thr Asp His Pro Val Leu Ser Phe Asn
 165 170 175
 Glu His Phe Asn Ile Phe Leu Thr Ala Lys Asp Leu Asn Ala Tyr Lys
 180 185 190
 Lys Gln Gly Ile Ala Leu Leu Thr Arg Met Gly Glu Ser Val Lys His
 195 200 205
 Val Thr Arg
 210

<210> 5913
 <211> 2495
 <212> DNA
 <213> Homo sapiens

<400> 5913
 attttttttt tttttttttt tttttttttt tttttttttt tttttaatct tctcttctct
 60
 cattttatag ggagaaaacc aagccactgg ccccggtaca cagcaagtta gtagtaagac
 120
 tgagattcga accctgggtca aacagacttt ccattttggt ccactgactc agtcttctct
 180
 tttacacttg aatcagactt ttagttttat tgtagttttt gagtccatag ctgtcttctc
 240
 gtactgtctt gactctttga ctaaactgat ttcacatctt taaaattatg ctttcctttt
 300
 aggtcattt ttagctcagc tgttgacagc tattttttaa tgtaacatga cataatatat
 360
 ttcttaaata atttaaaata atctagcttg agctgctctg aaggttagtc agttggtggt
 420
 gtgcatagag gtagagcctt cccccactct caaggatgct gtgaggggta ttcctaccat
 480
 gtggtgagtt gggaggtttt cctgaggtcc ttttccatcc tgagactctg gttttccatt
 540
 ttgtttctca caggccaggg ctttgaccga cacttggttg ctctgcggca tctggcagca
 600
 gcanaaggga tcattcttgc tgagctctac ctggaccctg catacgggca gataaaccac
 660
 aatgtcctgt ccacgagcac actgagcagc ccagcagtga accnttgtag gtttgccct
 720
 gtggtctctg atgcttttgg tgttggttat gctgttcatt acaactggat aggctgcaat
 780

gtctcttctt acccaggccg caatgcccgg gagtttctcc aatgtgtgga gaaggctnta
840
gaagacatgt ttgatgcctt agaaggcaaa tccatcaaaa gttaacttct gggcagatga
900
aaagctacca tcacttcttc atcatgaaaa ctgggaggcc gggcatggtg gctcatgcct
960
gtaatcccag cattttgaga ggctgaggcg ggtggatcac ttgaggtcag gagtttgaga
1020
ccaacctggc caacatggtg aaaccttgtc tctactaaaa atacaaaaat tagctgggtg
1080
tgggtggcatg tgcctataat cccagctact tgggaggttg aagcagaatt gcttgaacct
1140
aggaggtgga ggttgccagt agctgagatc acaccactgc actccggcct gggcgacaga
1200
gcgagactgt ctcaaaaaaa caaaaaagaa aaaaaactg gggcctgtgt agccagtggg
1260
tgctattctg tgaactaat cataagctgc ctaggcagcc agctacaggc ttgagcttta
1320
aattcatggt tttaaagcta aacgtaattt ccacttggga ctagatcaca actgaagata
1380
acaagagatt taagttttaa gggcatttaa tcaggaggaa aggtttggaa aactaactca
1440
ggtgtattta ttgtttaagc agaaataaag tttattttt gcttgaagat ggttccta
1500
ttcttttaac ctaattccta atcctcacia agatctttcc aacagcaagt tcagtaagtt
1560
caggtaacag tacgtcacca ttggcttctg gctcattgag tgatgggtgg atcgcggtt
1620
catctctgta aacttgccct tgactgggga gataccatct ccttaaaaat actcttcatt
1680
ttcctaagga gtgaactgct gctgcacgaa ttcttatttg tggagggagt agctgcctcc
1740
ttacttcacc ttcatgcacc agtgcagcgt gaacaggggc tttattgatg gggcttggga
1800
agctgtaata aagtcacgca tgcagattgt gaaggtttcg tatagccacc aggagacaag
1860
ggtcaaagga acgagcctct gtgggctctg ctgcttagag tactttgtcc tttctcagtt
1920
cttaagggca actgggaagg aagaggatc agcaactcac aaactggtgg gtgacctcat
1980
agattcccac agactcctgg gccttttcat catagtcagt ccagtccttc tctgcagat
2040
taatgtcact gaaggctgtc cctgactcca caccttcagc agcaaaccca gcctgcggct
2100
ggaaatcaac tggttcaagg ccccggcact caaactccac tattgtcttg aagttctcat
2160
tgtcttcage attgtaaggc ttgatggtgc tgcttaaaat ctcgatggaa tttctcttg
2220
cacacagctt gcacttctgg accatggaag cactgccacg gcccccttc agtgccacac
2280
tgccatcag ccggtgtac tgccacttgt ccgaaatctc accacagttg ccacatttca
2340
tcttcaggta ccacgggaag tcttcgcca cgggcccggag gttggtgatg ttctccagcg
2400

tggctttgag ttgcagcgcg attttcccca tggtagccct ctccgcccg tgctggctgc
 2460
 ggcccttgcc gttgctttcc ggcgcgtcgt aaaag
 2495

<210> 5914
 <211> 158
 <212> PRT
 <213> Homo sapiens

<400> 5914
 Ser Val Gly Gly Val His Arg Gly Arg Ala Phe Pro His Ser Gln Gly
 1 5 10 15
 Cys Cys Glu Gly Tyr Ser Tyr His Val Val Ser Trp Glu Val Phe Leu
 20 25 30
 Arg Ser Phe Ser Ile Leu Arg Leu Trp Phe Ser Ile Leu Phe Leu Thr
 35 40 45
 Gly Gln Gly Phe Asp Arg His Leu Phe Ala Leu Arg His Leu Ala Ala
 50 55 60
 Ala Xaa Gly Ile Ile Leu Pro Glu Leu Tyr Leu Asp Pro Ala Tyr Gly
 65 70 75 80
 Gln Ile Asn His Asn Val Leu Ser Thr Ser Thr Leu Ser Ser Pro Ala
 85 90 95
 Val Asn Xaa Cys Arg Phe Ala Pro Val Val Ser Asp Ala Phe Gly Val
 100 105 110
 Gly Tyr Ala Val His Asp Asn Trp Ile Gly Cys Asn Val Ser Ser Tyr
 115 120 125
 Pro Gly Arg Asn Ala Arg Glu Phe Leu Gln Cys Val Glu Lys Ala Xaa
 130 135 140
 Glu Asp Met Phe Asp Ala Leu Glu Gly Lys Ser Ile Lys Ser
 145 150 155

<210> 5915
 <211> 457
 <212> DNA
 <213> Homo sapiens

<400> 5915
 taccgaagac tcagcaactc cagcctctgt agcattgaag aagagcaccg aatggtgtat
 60
 gaaatggtac agcggattct cttgtcaaca cgaggttatg tcaacttcgt gaatgaagta
 120
 tttcaccagg catttttgtt gccttcctgt gagatagctg taacaagaaa agtagttcaa
 180
 gtgtacagaa agtggattct ccaggacaaa cctgtgttca tggaggagcc agatagaaaa
 240
 gatgttgccc aagaagatgc tgaaaaatta ggattttccg agactgatag caaggaggcc
 300
 tcactgaaa gttctgggtca taaacgatct tccagttggg gacgcacata ctcttcaca
 360
 agtgcaatga gcagaggggtg tgtgacagag gaggaaaata caaatgtgaa agccggcgtc
 420
 caggctttgt tgcaggtatt tttggcgaac tctgcag
 457

<210> 5916
 <211> 152
 <212> PRT
 <213> Homo sapiens

<400> 5916
 Tyr Arg Arg Leu Ser Asn Ser Ser Leu Cys Ser Ile Glu Glu Glu His
 1 5 10 15
 Arg Met Val Tyr Glu Met Val Gln Arg Ile Leu Leu Ser Thr Arg Gly
 20 25 30
 Tyr Val Asn Phe Val Asn Glu Val Phe His Gln Ala Phe Leu Leu Pro
 35 40 45
 Ser Cys Glu Ile Ala Val Thr Arg Lys Val Val Gln Val Tyr Arg Lys
 50 55 60
 Trp Ile Leu Gln Asp Lys Pro Val Phe Met Glu Glu Pro Asp Arg Lys
 65 70 75 80
 Asp Val Ala Gln Glu Asp Ala Glu Lys Leu Gly Phe Ser Glu Thr Asp
 85 90 95
 Ser Lys Glu Ala Ser Ser Glu Ser Ser Gly His Lys Arg Ser Ser Ser
 100 105 110
 Trp Gly Arg Thr Tyr Ser Phe Thr Ser Ala Met Ser Arg Gly Cys Val
 115 120 125
 Thr Glu Glu Glu Asn Thr Asn Val Lys Ala Gly Val Gln Ala Leu Leu
 130 135 140
 Gln Val Phe Leu Ala Asn Ser Ala
 145 150

<210> 5917
 <211> 3727
 <212> DNA
 <213> Homo sapiens

<400> 5917
 gcttgccggcc gcgtgacggt ggccgacaag aaggctccgc cggccctgat cgacgagtgc
 60
 atcgagaagt tcaatcacgt cagcggcagc cgggggtccg agagcccccg ccccaaccgc
 120
 ccccatgccg cgcgccacag ggagccagga cctgtgcgca ggcccatgcg caagtccctc
 180
 tcccagcccg gcctgcgctc gctggccttt aggaaggagc tgcaggatgg gggcctccga
 240
 agcagcggct tcttcagctc cttcgaggag agcgacattg agaaccacct cattagcgga
 300
 cacaatattg tgcagccac agatatcgag gaaaaatcgaa ctatgctctt cagcattggc
 360
 cagtctgaag ttacctcat cagtcctgac accaaaaaa tagcattgga gaaaaatctt
 420
 aaggagatat ccttttgctc tcagggcac agacacgtgg accactttgg gtttatctgt
 480
 cgggagtctt ccggagggtg cggtttcat tttgtctgt acgtgtttca gtgcacaaat
 540
 gaggtctgtg ttgatgaaat tatgatgacc ctgaacagg ccttcacggt ggccgcagtg
 600

cagcagacag ctaaggcgcc agcccagctg tgtgagggt gccccctgca aagcctgcac
660
aagctctgtg agaggataga gggaatgaat tcttccaaaa caaaactaga actgcaaaag
720
cacctgacga cattaaccaa tcaggagcag gcgactatct ttgaagaggt tcagaaattg
780
agaccgagaa atgagcagcg agagaatgaa ttgattatct cttttctgag atgtttatat
840
gaagagaaaac agaaagaaca catccatatt ggggagatga agcagacatc gcagatggca
900
gcagagaata ttggaagtga attaccaccc agtgccactc gatttaggct agatatgtg
960
aaaaacaaag caaagagatc tttaacagag tcttttagaa gtattttgtc ccggggtaat
1020
aaagccagag gcctgcagga aactccatc agtggtggatc tggatagctc cctgtctagt
1080
acattaagta acaccagcaa agagccatct gtgtgtgaaa aggaggcctt gcccatctct
1140
gagagctcct ttaagctcct cggtccctcg gaggacctgt ccagtgactc ggagagtcat
1200
ctcccagaag agccagctcc gctgtcgccc cagcaggcct tcaggaggcg agcaaacacc
1260
ctgagtcact tccccatcga atgccaggaa cctccacaac ctgcccgggg gtccccgggg
1320
gtttcgcaaa ggaaacttat gaggtatcac tcagttagca cagagacgcc tcatgaacga
1380
aaggactttg aatccaaagc aaaccatctt ggtgattctg gtgggactcc tgtgaagacc
1440
cggaggcatt cctggaggca gcagatatc ctccagtag ccaccccgca gaaggcgtgc
1500
gattcttcca gcagatatga agattattca gagctgggag agcttcccc acgatctcct
1560
ttagaaccag tttgtgaaga tgggcccttt ggccccacc agaggaaaag aaaaggacat
1620
ctcgtgagct ccgagagctg tggcaaaggg ctattcttca acagatactg cntgcttaga
1680
atggagaagg aaaatcagaa gctccaagcc tctgaaaatg atttgctgaa caagcgctg
1740
aagctcgatt atgaagaaat tactccctgt cttaaagaag taactacagt gtgggaaaag
1800
atgcttagca ctccaggaag atcaaaaatt aagtttgaca tggaaaaaat gcactcggct
1860
gttgggcaag gtgtgccacg tcatcaccga ggtgaaatct ggaaatttct agctgagcaa
1920
ttccacctta aacaccagtt tcccagcaaa cagcagccaa aggatgtgcc atacaaagaa
1980
ctcttaagc agctgacttc ccagcagcat gcgattctta ttgaccttg gcgaaccttt
2040
cctacacacc catacttctc tgcccagctt ggagcaggac agctatcgct ttacaacatt
2100
ttgaaggcct actcacttct agaccaggaa gtgggatatt gccaaagtct cagctttgta
2160
gcaggcattt tgcttcttca tatgagttag gaagaggcgt ttaaaatgct caagtttctg
2220

atgtttgaca tggggctgcg gaaacagtat cggccagaca tgattathtt acagatccag
2280
atgtaccagc tctcgagggt gtttcatgat taccacagag acctctacaa tcacctggag
2340
gagcacgaga tcggccccag cctctacgct gccccctggt tcttcacat gtttgctca
2400
cagttcccgc tgggattcgt agccagagtc tttgatatga tttttcttca gggaacagag
2460
gtcatattta aagtggcttt aagtctgttg ggaagccata agcccttgat tctgcagcat
2520
gaaaacctag aaaccatagt tgactttata aaaagcacgc taccacacct tggtttggtta
2580
cagatggaaa agaccatcaa tcaggatattt gaaatggaca tcgctaaaca gttacaagct
2640
tatgaagttg agtaccacgt ccttcaagaa gaacttatcg attcctctcc tctcagtgc
2700
aaccaaaaga tggataaatt agagaaaacc aacagcagct tacgcaaca gaacctgac
2760
ctccttgaa agttgcaggt ggcaaatggt aggatccaaa gccttgaggc caccattgag
2820
aagctcctga gcagtgcag caagctgaag caggccatgc ttaccttaga actggagcgg
2880
tcgctgctg cagacgggtg aggagctgcg gcggcggagc gcagagccca gcgaccggga
2940
gcctgagtg acgcagcccc agcccacggg cgactgacag cttgcaggag agattgcaac
3000
accatcacac tgtccaggcc ttaactgaga gggacagaag acgctggaag gagagaagga
3060
agcgggaagt gtgcttctca gggaggaaac cggcttgcca gcaagtagat tcttacgaac
3120
tccaacttgc aattcagggg gcatgtccca gtgtttttt tgtgttttt agatactaaa
3180
tcgtcccttc tccagtccctg attactgtac acagtagctt tagatggcgt ggacgtgaat
3240
aaatgcaact tatgttttct tgttggttcc tttttgagtg tcaactgtgtt tgtaaagagc
3300
attcacaata cgggtggaatt tcaaaaagctg gaagagctcg agatcatgcc tcaggcaaag
3360
gcgtgggtcc atcgttcttc cgagagggtt tgtgtggcga ctacaccctc agcgtccctg
3420
gcaaggtgca gttggctctc gcccatctt gttatggaaa cctaagatga tcattgggaa
3480
gatcagtgat cttgggtcat tgatccctgg ctgagaggat agcggtttcc atcataaacc
3540
aagatgatga gttcagcctt tatccctcgt ggttccacta gatgtaactt aaaggagtta
3600
acatttgagg actttgttct acatcagatt ttactatttg aatgtttaag atcactttat
3660
tgaatttgaa gatcatcaaa ttaataaaaa tgatttatht aatttgagata tcctgaaaaa
3720
aaaaaaa
3727

<210> 5918

<211> 981
 <212> PRT
 <213> Homo sapiens

<400> 5918

```

Ala Cys Gly Arg Val Thr Val Ala His Lys Lys Ala Pro Pro Ala Leu
 1           5           10           15
Ile Asp Glu Cys Ile Glu Lys Phe Asn His Val Ser Gly Ser Arg Gly
 20           25           30
Ser Glu Ser Pro Arg Pro Asn Pro Pro His Ala Ala Arg His Arg Glu
 35           40           45
Pro Gly Pro Val Arg Arg Pro Met Arg Lys Ser Phe Ser Gln Pro Gly
 50           55           60
Leu Arg Ser Leu Ala Phe Arg Lys Glu Leu Gln Asp Gly Gly Leu Arg
 65           70           75           80
Ser Ser Gly Phe Phe Ser Ser Phe Glu Glu Ser Asp Ile Glu Asn His
 85           90           95
Leu Ile Ser Gly His Asn Ile Val Gln Pro Thr Asp Ile Glu Glu Asn
100          105          110
Arg Thr Met Leu Phe Thr Ile Gly Gln Ser Glu Val Tyr Leu Ile Ser
115          120          125
Pro Asp Thr Lys Lys Ile Ala Leu Glu Lys Asn Phe Lys Glu Ile Ser
130          135          140
Phe Cys Ser Gln Gly Ile Arg His Val Asp His Phe Gly Phe Ile Cys
145          150          155          160
Arg Glu Ser Ser Gly Gly Gly Phe His Phe Val Cys Tyr Val Phe
165          170          175
Gln Cys Thr Asn Glu Ala Leu Val Asp Glu Ile Met Met Thr Leu Lys
180          185          190
Gln Ala Phe Thr Val Ala Ala Val Gln Gln Thr Ala Lys Ala Pro Ala
195          200          205
Gln Leu Cys Glu Gly Cys Pro Leu Gln Ser Leu His Lys Leu Cys Glu
210          215          220
Arg Ile Glu Gly Met Asn Ser Ser Lys Thr Lys Leu Glu Leu Gln Lys
225          230          235          240
His Leu Thr Thr Leu Thr Asn Gln Glu Gln Ala Thr Ile Phe Glu Glu
245          250          255
Val Gln Lys Leu Arg Pro Arg Asn Glu Gln Arg Glu Asn Glu Leu Ile
260          265          270
Ile Ser Phe Leu Arg Cys Leu Tyr Glu Glu Lys Gln Lys Glu His Ile
275          280          285
His Ile Gly Glu Met Lys Gln Thr Ser Gln Met Ala Ala Glu Asn Ile
290          295          300
Gly Ser Glu Leu Pro Pro Ser Ala Thr Arg Phe Arg Leu Asp Met Leu
305          310          315          320
Lys Asn Lys Ala Lys Arg Ser Leu Thr Glu Ser Leu Glu Ser Ile Leu
325          330          335
Ser Arg Gly Asn Lys Ala Arg Gly Leu Gln Glu His Ser Ile Ser Val
340          345          350
Asp Leu Asp Ser Ser Leu Ser Ser Thr Leu Ser Asn Thr Ser Lys Glu
355          360          365
Pro Ser Val Cys Glu Lys Glu Ala Leu Pro Ile Ser Glu Ser Ser Phe
370          375          380
Lys Leu Leu Gly Ser Ser Glu Asp Leu Ser Ser Asp Ser Glu Ser His

```

```

385          390          395          400
Leu Pro Glu Glu Pro Ala Pro Leu Ser Pro Gln Gln Ala Phe Arg Arg
          405          410          415
Arg Ala Asn Thr Leu Ser His Phe Pro Ile Glu Cys Gln Glu Pro Pro
          420          425          430
Gln Pro Ala Arg Gly Ser Pro Gly Val Ser Gln Arg Lys Leu Met Arg
          435          440          445
Tyr His Ser Val Ser Thr Glu Thr Pro His Glu Arg Lys Asp Phe Glu
          450          455          460
Ser Lys Ala Asn His Leu Gly Asp Ser Gly Gly Thr Pro Val Lys Thr
465          470          475          480
Arg Arg His Ser Trp Arg Gln Gln Ile Phe Leu Arg Val Ala Thr Pro
          485          490          495
Gln Lys Ala Cys Asp Ser Ser Ser Arg Tyr Glu Asp Tyr Ser Glu Leu
          500          505          510
Gly Glu Leu Pro Pro Arg Ser Pro Leu Glu Pro Val Cys Glu Asp Gly
          515          520          525
Pro Phe Gly Pro His Gln Arg Lys Arg Lys Gly His Leu Val Ser Ser
          530          535          540
Glu Ser Cys Gly Lys Gly Leu Phe Phe Asn Arg Tyr Cys Xaa Leu Arg
545          550          555          560
Met Glu Lys Glu Asn Gln Lys Leu Gln Ala Ser Glu Asn Asp Leu Leu
          565          570          575
Asn Lys Arg Leu Lys Leu Asp Tyr Glu Glu Ile Thr Pro Cys Leu Lys
          580          585          590
Glu Val Thr Thr Val Trp Glu Lys Met Leu Ser Thr Pro Gly Arg Ser
          595          600          605
Lys Ile Lys Phe Asp Met Glu Lys Met His Ser Ala Val Gly Gln Gly
          610          615          620
Val Pro Arg His His Arg Gly Glu Ile Trp Lys Phe Leu Ala Glu Gln
625          630          635          640
Phe His Leu Lys His Gln Phe Pro Ser Lys Gln Gln Pro Lys Asp Val
          645          650          655
Pro Tyr Lys Glu Leu Leu Lys Gln Leu Thr Ser Gln Gln His Ala Ile
          660          665          670
Leu Ile Asp Leu Gly Arg Thr Phe Pro Thr His Pro Tyr Phe Ser Ala
          675          680          685
Gln Leu Gly Ala Gly Gln Leu Ser Leu Tyr Asn Ile Leu Lys Ala Tyr
          690          695          700
Ser Leu Leu Asp Gln Glu Val Gly Tyr Cys Gln Gly Leu Ser Phe Val
705          710          715          720
Ala Gly Ile Leu Leu Leu His Met Ser Glu Glu Glu Ala Phe Lys Met
          725          730          735
Leu Lys Phe Leu Met Phe Asp Met Gly Leu Arg Lys Gln Tyr Arg Pro
          740          745          750
Asp Met Ile Ile Leu Gln Ile Gln Met Tyr Gln Leu Ser Arg Leu Leu
          755          760          765
His Asp Tyr His Arg Asp Leu Tyr Asn His Leu Glu Glu His Glu Ile
          770          775          780
Gly Pro Ser Leu Tyr Ala Ala Pro Trp Phe Leu Thr Met Phe Ala Ser
785          790          795          800
Gln Phe Pro Leu Gly Phe Val Ala Arg Val Phe Asp Met Ile Phe Leu
          805          810          815
Gln Gly Thr Glu Val Ile Phe Lys Val Ala Leu Ser Leu Leu Gly Ser

```

```

      820      825      830
His Lys Pro Leu Ile Leu Gln His Glu Asn Leu Glu Thr Ile Val Asp
      835      840      845
Phe Ile Lys Ser Thr Leu Pro Asn Leu Gly Leu Val Gln Met Glu Lys
      850      855      860
Thr Ile Asn Gln Val Phe Glu Met Asp Ile Ala Lys Gln Leu Gln Ala
865      870      875      880
Tyr Glu Val Glu Tyr His Val Leu Gln Glu Glu Leu Ile Asp Ser Ser
      885      890      895
Pro Leu Ser Asp Asn Gln Arg Met Asp Lys Leu Glu Lys Thr Asn Ser
      900      905      910
Ser Leu Arg Lys Gln Asn Leu Asp Leu Leu Glu Gln Leu Gln Val Ala
      915      920      925
Asn Gly Arg Ile Gln Ser Leu Glu Ala Thr Ile Glu Lys Leu Leu Ser
      930      935      940
Ser Glu Ser Lys Leu Lys Gln Ala Met Leu Thr Leu Glu Leu Glu Arg
945      950      955      960
Ser Pro Ala Ala Asp Gly Gly Gly Ala Ala Ala Ala Glu Arg Arg Ala
      965      970      975
Gln Arg Pro Gly Ala
      980

```

<210> 5919

<211> 1320

<212> DNA

<213> Homo sapiens

<400> 5919

```

ggctgctgca tcttctccgc gctatggctg cgttcggccg tcaggaaatt aaagaggggtg
60
ctttactgtt gccctgaaat tttcaccatg cgccagcagg acattaacga cactgtcagg
120
cttctcaagg agaagtgcct tttcacggta cagcaagtca ccaagatttt gcacagttgc
180
ccctctgttc ttcgagagga cctgggtcaa ctggaataca agtttcagca gcctcgtctt
240
acagcgtgac tgcaaagaaa aagacttttg ttttgcaaaa gaaaagcagc tcggtgactc
300
cgtccacatc gccacagttg agtcagatgg cagtggcagt cctttgccag tggaaggagt
360
tcctgctaag gggaggtgca ggaggactaa tttattattg tgcaactgcc agtcctgcgc
420
attccagcta cgctaagcgc cctgcccagg cacgtaacaa aacatagacc tgttttgaag
480
tggtttgtta cccaaggggt cctcactcat ctgcgccacc aggaagatga actgtgaggg
540
ctcctataag gggcaggaag agcaaagctg tcctaggcca accagagatt catctttcat
600
gcagtgacat gttgataaaa aatgatggtc agtatgaaac tggtaacagg ttgtagatgg
660
ctttctatgg tatatcccag tctcttgcaa acgattgtga agaatgccag tgttgtttaa
720
gattcggcag tttgtgtggg gaggtggggg caggatgggg tttggttgcc aaaagagttt
780

```

gggaaatgct ggcttaaaca aaggcgagag gaagttcctt tcacgtcagg atttatgaat
 840
 gcctatgagc ccagtgtcag tgacgacttt ctagcgggcg tcttcaacac tttctaaata
 900
 ttaagcgatc aaggccccctg cccactttt agttccaaca gaatgccgtt cacaagatct
 960
 gggaggcact ctctcagccc tctcctggag cccccggaat ttctcagcag cccaggccct
 1020
 cccgctgccc gtggcccctc ctcccagggtg ccaggtggtc ttccagcctc tccaagggcc
 1080
 cccccctg cctcttctc cactgcagc tgatctaggg gtttcttggc cacatttccc
 1140
 ttgagagaga gtgggatttg ccctatccac agagagcctc atttccacct gaaggtgtat
 1200
 ttgtcagtgg ctagaccagg ttcattgtctg tttcccttg gggacttctg aaccttctg
 1260
 cccgggagtc tgtaaacagc agcacaggac cgcgttctt ttagcagtgc tgagtaagca
 1320

<210> 5920

<211> 93

<212> PRT

<213> Homo sapiens

<400> 5920

Met	Arg	Leu	Ser	Val	Asp	Arg	Ala	Asn	Pro	Thr	Leu	Ser	Gln	Gly	Lys
1				5					10					15	
Cys	Gly	Gln	Glu	Thr	Pro	Arg	Ser	Ala	Ala	Val	Gly	Gly	Arg	Gly	Arg
			20					25					30		
Gly	Val	Gly	Pro	Trp	Arg	Gly	Trp	Lys	Thr	Thr	Trp	His	Leu	Gly	Gly
		35				40						45			
Gly	Ala	Thr	Gly	Ser	Gly	Arg	Ala	Trp	Ala	Ala	Glu	Lys	Phe	Arg	Gly
	50					55					60				
Leu	Gln	Glu	Arg	Ala	Glu	Arg	Val	Pro	Pro	Arg	Ser	Cys	Glu	Arg	His
65					70					75				80	
Ser	Val	Gly	Thr	Lys	Ser	Gly	Ala	Gly	Ala	Leu	Ile	Ala			
				85					90						

<210> 5921

<211> 4130

<212> DNA

<213> Homo sapiens

<400> 5921

nncaccttac ttcagcccct caaggacac aaagacactg tgtactgtgt ggcattatgcg
 60
 aaggatggca agcgctttgc ttctggatca gctgacaaaa gcgttattat ctggacatca
 120
 aaactggaag gcattctgaa gtacacgcac aatgatgcta tacaatgtgt ctctacaat
 180
 cctattactc atcaactggc atcttgttcc tccagtgact ttgggttggt gtctctgaa
 240
 cagaagtctg tctccaaaca caaatcaagc agcaagatca tctgctgcag ctggacaaat
 300

gatggtcagt acctggcgct ggggatgttc aatgggatca tcagcatacg gaacaaaaat
360
ggcgaggaga aagtaaagat cgagcgccg gggggctccc tctcgccaat atgggccatc
420
tgctggaacc cttcaagccg atgggagagt ttctggatga acagagagaa tgaggatgcc
480
gaggatgtca ttgtcaacag atatattcag gaaatccctt ccactctgaa gtcagcagtg
540
tacagtagtc agggtagtga ggcagaggag gaagaaccag aggaagagga cgacagtccc
600
agggacgaca acttagagga acgtaatgac atcctggctg tggctgactg gggacagaaa
660
gtttccttct accagctgag tggaaaacag attggaagg atcgggcact gaactttgac
720
ccctgctgca tcagctactt tactaaaggc gagtacattt tgctgggggg ttcagacaag
780
caagtttctc ttttcaccaa ggatggagtg cggcttggga ctgttgggga gcagaactcc
840
tggtgtgga cgtgtcaagc gaaaccggat tccaactatg tgggtgctcg ctgccaggac
900
ggcaccattt ccttctacca gcttattttc agcacagtcc atgggcttta caaggaccgc
960
tatgcctaca gggatagcat gactgacgtc attgtgcagc acctgatcac tgagcagaaa
1020
gttcggatta aatgcaaaga gcttgtcaag aagattgcc a tctacagaaa tcgattggct
1080
atccaactgc cagagaaaaat cctcatctat gaggttgtatt cagaggactt atcagacatg
1140
cattaccggg taaaggagaa gattatcaag aagtttgagt gcaacctcct ggtgggtgtg
1200
gccaatcaca tcctcctgtg ccaggagaaa cggctgcagt gcctgtcctt cagcggagtg
1260
aaggagcggg agtggcagat ggagtctctc attcgttaca tcaaggatgat cgggtggcct
1320
cctggaagag aaggcctcct agtggggctg aagaatggac agatcctgaa gatcttcgtg
1380
gacaatctct ttgctatcgt cctgctgaag caggccacag ctgtgcgctg cttggacatg
1440
agtgcctccc gtaagaagct ggccgtggta gatgaaaatg acacttgcct ggtgtatgac
1500
atcgacacca aggagctgct ttttcaggaa ccaaaccgca acagtgtagc ttggaacacc
1560
cagtgtgagg acatgctctg cttctcggga ggaggctacc tcaacatcaa agccagcacc
1620
ttccctgtgc accggcagaa gctgcagggc tttgtggctg gctacaatgg ctccaagatc
1680
ttctgcctcc atgtcttctc ctttctgtcc gtggagggtg cgcagtcctg tcccatgtac
1740
cagtacctgg ataggaaact gttcaaggaa gcctaccaga ttgcttgctt ggggtgtcaca
1800
gacactgatt ggcgtgaact ggccatggaa gcgctagaag gtttagattt tgaaacagca
1860
aagaaggcct tcacagagt acaagacctc cgatatctag agctcatcag cagcattgag
1920

gagaggaaga agcggggaga gaccaacaat gacctgtttc tggcagatgt gttttcctac
1980
caggggaagt tccatgaggc cgccaaactg tacaagagga gtgggcacga gaacctcgcg
2040
cttgaaatgt acaccgacct ctgcatgttt gagtatgcca aggatttcct tggatctgga
2100
gaccccaaag aaacaaagat gctaatacacc aaacaggctg actggggccag aaatatcaag
2160
gagcccaaag ccgccgtgga gatgtacatc tcagcaggag agcacgtcaa ggccatcgag
2220
atctgtgtg accatggctg ggttgacatg ttgatcgaca tgcgccgcaa actggacaag
2280
gctgagcgcg agccctgct gctgtgcgct acctacctca agaagctgga cagccctggc
2340
tatgctgctg agacctacct gaagatgggt gacctcaagt ccttgggtgca gctgcacgtg
2400
gagaccacgc gctgggatga ggcttttgct ttgggtgaga agcatcctga gtttaaggat
2460
gacatctaca tgccgtatgc tcagtggcta gcagagaacg atcgctttga ggaagccag
2520
aaagcgttcc acaaggctgg gcgacagaga gaagcggtec aggtgctgga gcagctcaca
2580
aacaatgccg tggcggagag caggtttaat gatgctgcct attattactg gatgctgtcc
2640
atgcagtgcc tcgatatagc tcaagcagat cctgccaga aggacacaat gcttggcaag
2700
ttctaccact tccagcgttt ggcagagctg taccatggtt accatgccat ccacgcccac
2760
acggaagatc cgttcagtgt ccacgtcctt gaaactcttt tcaacatctc caggttcctg
2820
ctgcacagcc tgcccaagga cccccctcg ggcatctcta aagtgaaaat actcttcacc
2880
ttggccaagc agagcaaggc cctcggtgcc tacaggctgg cccggcacgc ctatgacaag
2940
ctgcgtggcc tgtacatccc tgccagattc caaaagtcca ttgagctggg taccctgacc
3000
atccgcgcca agcccttcca cgacagtgag gagttggtgc ccttgtgcta ccgctgtcc
3060
accaacaacc cgctgctcaa caacctgggc aacgtctgca tcaactgccg ccagcccttc
3120
atcttctccg cctcttecta cgacgtgcta cacctggttg agttctacct ggaggaaggg
3180
atcactgatg aagaagccat ctccctcacc gacctggagg tgctgagacc caagcgggat
3240
gacagacagc tagagattgc aaacaacagc tcccagattc tgccgctagt ggagaccaag
3300
gactccatcg gagatgagga cccgttcaca gctaagctga gctttgagca aggtggctca
3360
gagttcgtgc cagtgggtgt gagccggctg gtgctgcgct ccatgagccg cgggatgtc
3420
ctcatcaagc gatggcccc acccctgagg tggcaatact tccgtcact gctgcctgac
3480
gcctccatta ccattgtccc ctctgtctc caggtaggtg gccaccctgg tagctcacat
3540

gtgcttctct tggccacttt tcccttgccc aaatgtccct ctgggaggcg gggcccctgg
 3600
 gagggagggg cacatccatg gctccaagtt gggacagagg ctgtgtctgtc ctctcccctg
 3660
 cttgcattcc atgtgcatct aaagtggact tcaactggccc ctgcgctgtc cacatccctc
 3720
 ccaaatcctg ggggcccagc aagcgtgatg tgcccttgac cttcactcag aaaacaagaa
 3780
 accccacagc cccctcccat ctecccttcc agccctcaaa caaagggtgtc gcagggtctgt
 3840
 gtccagccct gaccactgcc aagccccctc cccttgagag gcagtgcgtc ctggcccag
 3900
 gcgtagggtc gatgagcact agggcttcag cctggtctta cagctgtctt cccttagatg
 3960
 ttccattctg aggactatga gttgctggtg cttcagcatg gctgctgccc ctactgccgc
 4020
 aggtgcaagg atgaccctgg cccatgacca gcacccctggg gacggcctgc accctctgcc
 4080
 cgccttgagg tctgctgggc tgtgaaggag aataaagagt taaactgtca
 4130

<210> 5922

<211> 1252

<212> PRT

<213> Homo sapiens

<400> 5922

Xaa	Thr	Leu	Leu	Gln	Pro	Leu	Lys	Gly	His	Lys	Asp	Thr	Val	Tyr	Cys
1			5					10						15	
Val	Ala	Tyr	Ala	Lys	Asp	Gly	Lys	Arg	Phe	Ala	Ser	Gly	Ser	Ala	Asp
			20					25					30		
Lys	Ser	Val	Ile	Ile	Trp	Thr	Ser	Lys	Leu	Glu	Gly	Ile	Leu	Lys	Tyr
			35					40					45		
Thr	His	Asn	Asp	Ala	Ile	Gln	Cys	Val	Ser	Tyr	Asn	Pro	Ile	Thr	His
			50				55				60				
Gln	Leu	Ala	Ser	Cys	Ser	Ser	Ser	Asp	Phe	Gly	Leu	Trp	Ser	Pro	Glu
65							70			75					80
Gln	Lys	Ser	Val	Ser	Lys	His	Lys	Ser	Ser	Ser	Lys	Ile	Ile	Cys	Cys
							85			90				95	
Ser	Trp	Thr	Asn	Asp	Gly	Gln	Tyr	Leu	Ala	Leu	Gly	Met	Phe	Asn	Gly
			100					105					110		
Ile	Ile	Ser	Ile	Arg	Asn	Lys	Asn	Gly	Glu	Glu	Lys	Val	Lys	Ile	Glu
			115					120					125		
Arg	Pro	Gly	Gly	Ser	Leu	Ser	Pro	Ile	Trp	Ser	Ile	Cys	Trp	Asn	Pro
			130				135					140			
Ser	Ser	Arg	Trp	Glu	Ser	Phe	Trp	Met	Asn	Arg	Glu	Asn	Glu	Asp	Ala
145						150				155					160
Glu	Asp	Val	Ile	Val	Asn	Arg	Tyr	Ile	Gln	Glu	Ile	Pro	Ser	Thr	Leu
						165				170				175	
Lys	Ser	Ala	Val	Tyr	Ser	Ser	Gln	Gly	Ser	Glu	Ala	Glu	Glu	Glu	Glu
			180					185					190		
Pro	Glu	Glu	Glu	Asp	Asp	Ser	Pro	Arg	Asp	Asp	Asn	Leu	Glu	Glu	Arg
			195					200				205			
Asn	Asp	Ile	Leu	Ala	Val	Ala	Asp	Trp	Gly	Gln	Lys	Val	Ser	Phe	Tyr

210		215		220
Gln Leu Ser Gly Lys Gln Ile Gly Lys Asp Arg Ala Leu Asn Phe Asp				
225	230	235	240	
Pro Cys Cys Ile Ser Tyr Phe Thr Lys Gly Glu Tyr Ile Leu Leu Gly				
	245	250	255	
Gly Ser Asp Lys Gln Val Ser Leu Phe Thr Lys Asp Gly Val Arg Leu				
	260	265	270	
Gly Thr Val Gly Glu Gln Asn Ser Trp Val Trp Thr Cys Gln Ala Lys				
	275	280	285	
Pro Asp Ser Asn Tyr Val Val Val Gly Cys Gln Asp Gly Thr Ile Ser				
	290	295	300	
Phe Tyr Gln Leu Ile Phe Ser Thr Val His Gly Leu Tyr Lys Asp Arg				
305	310	315	320	
Tyr Ala Tyr Arg Asp Ser Met Thr Asp Val Ile Val Gln His Leu Ile				
	325	330	335	
Thr Glu Gln Lys Val Arg Ile Lys Cys Lys Glu Leu Val Lys Lys Ile				
	340	345	350	
Ala Ile Tyr Arg Asn Arg Leu Ala Ile Gln Leu Pro Glu Lys Ile Leu				
	355	360	365	
Ile Tyr Glu Leu Tyr Ser Glu Asp Leu Ser Asp Met His Tyr Arg Val				
	370	375	380	
Lys Glu Lys Ile Ile Lys Lys Phe Glu Cys Asn Leu Leu Val Val Cys				
385	390	395	400	
Ala Asn His Ile Ile Leu Cys Gln Glu Lys Arg Leu Gln Cys Leu Ser				
	405	410	415	
Phe Ser Gly Val Lys Glu Arg Glu Trp Gln Met Glu Ser Leu Ile Arg				
	420	425	430	
Tyr Ile Lys Val Ile Gly Gly Pro Pro Gly Arg Glu Gly Leu Leu Val				
	435	440	445	
Gly Leu Lys Asn Gly Gln Ile Leu Lys Ile Phe Val Asp Asn Leu Phe				
	450	455	460	
Ala Ile Val Leu Leu Lys Gln Ala Thr Ala Val Arg Cys Leu Asp Met				
465	470	475	480	
Ser Ala Ser Arg Lys Lys Leu Ala Val Val Asp Glu Asn Asp Thr Cys				
	485	490	495	
Leu Val Tyr Asp Ile Asp Thr Lys Glu Leu Leu Phe Gln Glu Pro Asn				
	500	505	510	
Ala Asn Ser Val Ala Trp Asn Thr Gln Cys Glu Asp Met Leu Cys Phe				
	515	520	525	
Ser Gly Gly Gly Tyr Leu Asn Ile Lys Ala Ser Thr Phe Pro Val His				
	530	535	540	
Arg Gln Lys Leu Gln Gly Phe Val Val Gly Tyr Asn Gly Ser Lys Ile				
545	550	555	560	
Phe Cys Leu His Val Phe Ser Ile Ser Ala Val Glu Val Pro Gln Ser				
	565	570	575	
Ala Pro Met Tyr Gln Tyr Leu Asp Arg Lys Leu Phe Lys Glu Ala Tyr				
	580	585	590	
Gln Ile Ala Cys Leu Gly Val Thr Asp Thr Asp Trp Arg Glu Leu Ala				
	595	600	605	
Met Glu Ala Leu Glu Gly Leu Asp Phe Glu Thr Ala Lys Lys Ala Phe				
	610	615	620	
Ile Arg Val Gln Asp Leu Arg Tyr Leu Glu Leu Ile Ser Ser Ile Glu				
625	630	635	640	
Glu Arg Lys Lys Arg Gly Glu Thr Asn Asn Asp Leu Phe Leu Ala Asp				

					645					650					655		
Val	Phe	Ser	Tyr	Gln	Gly	Lys	Phe	His	Glu	Ala	Ala	Lys	Leu	Tyr	Lys		
			660					665					670				
Arg	Ser	Gly	His	Glu	Asn	Leu	Ala	Leu	Glu	Met	Tyr	Thr	Asp	Leu	Cys		
		675					680					685					
Met	Phe	Glu	Tyr	Ala	Lys	Asp	Phe	Leu	Gly	Ser	Gly	Asp	Pro	Lys	Glu		
	690					695					700						
Thr	Lys	Met	Leu	Ile	Thr	Lys	Gln	Ala	Asp	Trp	Ala	Arg	Asn	Ile	Lys		
705					710					715					720		
Glu	Pro	Lys	Ala	Ala	Val	Glu	Met	Tyr	Ile	Ser	Ala	Gly	Glu	His	Val		
			725						730					735			
Lys	Ala	Ile	Glu	Ile	Cys	Gly	Asp	His	Gly	Trp	Val	Asp	Met	Leu	Ile		
		740						745					750				
Asp	Ile	Ala	Arg	Lys	Leu	Asp	Lys	Ala	Glu	Arg	Glu	Pro	Leu	Leu	Leu		
	755					760						765					
Cys	Ala	Thr	Tyr	Leu	Lys	Lys	Leu	Asp	Ser	Pro	Gly	Tyr	Ala	Ala	Glu		
	770					775					780						
Thr	Tyr	Leu	Lys	Met	Gly	Asp	Leu	Lys	Ser	Leu	Val	Gln	Leu	His	Val		
785					790					795					800		
Glu	Thr	Gln	Arg	Trp	Asp	Glu	Ala	Phe	Ala	Leu	Gly	Glu	Lys	His	Pro		
			805						810					815			
Glu	Phe	Lys	Asp	Asp	Ile	Tyr	Met	Pro	Tyr	Ala	Gln	Trp	Leu	Ala	Glu		
		820						825					830				
Asn	Asp	Arg	Phe	Glu	Glu	Ala	Gln	Lys	Ala	Phe	His	Lys	Ala	Gly	Arg		
	835					840						845					
Gln	Arg	Glu	Ala	Val	Gln	Val	Leu	Glu	Gln	Leu	Thr	Asn	Asn	Ala	Val		
	850					855					860						
Ala	Glu	Ser	Arg	Phe	Asn	Asp	Ala	Ala	Tyr	Tyr	Tyr	Trp	Met	Leu	Ser		
865					870					875				880			
Met	Gln	Cys	Leu	Asp	Ile	Ala	Gln	Ala	Asp	Pro	Ala	Gln	Lys	Asp	Thr		
		885							890					895			
Met	Leu	Gly	Lys	Phe	Tyr	His	Phe	Gln	Arg	Leu	Ala	Glu	Leu	Tyr	His		
		900						905						910			
Gly	Tyr	His	Ala	Ile	His	Arg	His	Thr	Glu	Asp	Pro	Phe	Ser	Val	His		
	915					920						925					
Arg	Pro	Glu	Thr	Leu	Phe	Asn	Ile	Ser	Arg	Phe	Leu	Leu	His	Ser	Leu		
	930					935					940						
Pro	Lys	Asp	Thr	Pro	Ser	Gly	Ile	Ser	Lys	Val	Lys	Ile	Leu	Phe	Thr		
945					950					955				960			
Leu	Ala	Lys	Gln	Ser	Lys	Ala	Leu	Gly	Ala	Tyr	Arg	Leu	Ala	Arg	His		
			965						970		</						

1075 1080 1085
 Asn Ser Ser Gln Ile Leu Arg Leu Val Glu Thr Lys Asp Ser Ile Gly
 1090 1095 1100
 Asp Glu Asp Pro Phe Thr Ala Lys Leu Ser Phe Glu Gln Gly Gly Ser
 1105 1110 1115 1120
 Glu Phe Val Pro Val Val Val Ser Arg Leu Val Leu Arg Ser Met Ser
 1125 1130 1135
 Arg Arg Asp Val Leu Ile Lys Arg Trp Pro Pro Pro Leu Arg Trp Gln
 1140 1145 1150
 Tyr Phe Arg Ser Leu Leu Pro Asp Ala Ser Ile Thr Met Cys Pro Ser
 1155 1160 1165
 Cys Phe Gln Val Gly Gly His Pro Gly Ser Ser His Val Leu Leu Leu
 1170 1175 1180
 Ala Thr Phe Pro Leu Pro Lys Cys Pro Ser Gly Arg Arg Gly Pro Trp
 1185 1190 1195 1200
 Glu Gly Gly Ala His Pro Trp Leu Gln Val Gly Thr Glu Ala Cys Leu
 1205 1210 1215
 Ser Ser Pro Leu Leu Ala Phe His Val His Leu Lys Trp Thr Ser Leu
 1220 1225 1230
 Ala Pro Ala Leu Ser Thr Ser Ser Pro Asn Pro Gly Gly Pro Ala Ser
 1235 1240 1245
 Val Met Cys Pro
 1250

<210> 5923

<211> 1989

<212> DNA

<213> Homo sapiens .

<400> 5923

gggcccccg aaggtccccg gccgtgcgcg aggcagcatg atgaggcgca ccttgaaaa
 60
 ccggaacgct caaacgaaac aactgcaaac agctgtctca aatgtggaga agcatttttg
 120
 agaactgtgc caaatcttcg ctgcctatgt gccgaaaact gccaggctga gagacaaagc
 180
 agacctctg gtgaatgaaa ttaacgcgta tgctgtctaca gagaccccg atttaaagct
 240
 gggcctgatg aactttgcag atgagtttgc caaacttcag gattatcgac aagcagaggt
 300
 tgaagactt gaagcccaaa aaggttgaaa gacttgaagc caaagtagtt gaacccttga
 360
 aaacttatgg gaccattgtg aaaatgaaac gggatgacct caaagcaaca ctacagcaa
 420
 ggaatcgaga agctaagcaa ttaactcagt tagaagaac acgtcagcga aacctatctg
 480
 atcgacatgt tattgtatcc ttggaatttg ggtcttttaa aaaatgttta aggcagaaac
 540
 ggaattacag agagctgcaa tggatgctag ccgaacaagt cgtcatctgg aggaaactat
 600
 taacaacttt gaaaggcaga aaatgaagga tataaagact atattttctg aatttatcac
 660
 aatcgaaatg ttatttcacg gcaaagcttt agaggtctac actgctgcct accagaatat
 720

acaaaacatt gatgaagatg aagatttaga ggttttccga aattctctgt atgcaccaga
 780
 ttattcatct cgtttagata ttgtaagagc aaattcaaag tcacctcttc agagatcact
 840
 gtcagctaag tgtgtatctg gaacaggaca ggtatccact tgtcgactaa gaaaggatca
 900
 acaagcagaa gatgatgagg atgacgagtt agatgttaca gaagaagaaa attttcttaa
 960
 gtaaaactaca catttccatt ttcatacata atgacttgaa atccacaatg actaaattgt
 1020
 agaactttat actcactttg ctatgttaag cctcaaagtg aagtccaact ggaaacagaa
 1080
 aaataattaa aggaaactta tgctgaccaa aatgaaggc tttaaaaaat attgcatacc
 1140
 agtcatttca acatccctacc tagtggtaca tgatttttgt gtaagtgcct ttttttttaa
 1200
 agatgggtga tttcaaagta tttcatatta atgtactata tctacttgaa gttccaatag
 1260
 tacattatga cagaaaccaa aagatctaac aattctgctt agcttttttg ttaagactcc
 1320
 atgctttcat taccagaaaa ggtcttacg tagtcattat gattcatgga attctattcc
 1380
 atgaagcctt aagaaaaaaa acttttttta actttccctg aaactttatc atttgataag
 1440
 taaatttact tttcaagaag agtataacca aagagtaaag ataatgtgac actaagttat
 1500
 caatgtttta tgaatacaca taaggcataa atttcagctg taaaaaagct acattcaatc
 1560
 tgactctggt tttaaaacaa aactgctgtc ataattatac atgatactgc aacttttgga
 1620
 aggctaattt ggtggaatgt tgcctcatca tagaacacca tagatcatta aaaattctat
 1680
 aaaaatttta ccaagctacc atatagttaa taaaagggtg tacagtcact tttatttctg
 1740
 aaaaataaaa acattgagcc tttcagtgtg tctgatgctt ctcttttggt aaggaatact
 1800
 tttatttcat ggatcccagg caggcatata aaagttacgg aatttataaa atcatttggg
 1860
 ataattagaa aatgcaatta ttcataacag aaaaataaag actttctaga aagcttctga
 1920
 ctttgtcaat catggctctg ttcttaacaa agcactcctt cctgagaata gtcctaagt
 1980
 acaaagttg
 1989

<210> 5924

<211> 146

<212> PRT

<213> Homo sapiens

<400> 5924

Met Phe Lys Ala Glu Thr Glu Leu Gln Arg Ala Ala Met Asp Ala Ser
 1 5 10 15
 Arg Thr Ser Arg His Leu Glu Glu Thr Ile Asn Asn Phe Glu Arg Gln

	20		25		30										
Lys	Met	Lys	Asp	Ile	Lys	Thr	Ile	Phe	Ser	Glu	Phe	Ile	Thr	Ile	Glu
	35					40					45				
Met	Leu	Phe	His	Gly	Lys	Ala	Leu	Glu	Val	Tyr	Thr	Ala	Ala	Tyr	Gln
	50					55					60				
Asn	Ile	Gln	Asn	Ile	Asp	Glu	Asp	Glu	Asp	Leu	Glu	Val	Phe	Arg	Asn
65					70					75				80	
Ser	Leu	Tyr	Ala	Pro	Asp	Tyr	Ser	Ser	Arg	Leu	Asp	Ile	Val	Arg	Ala
			85						90				95		
Asn	Ser	Lys	Ser	Pro	Leu	Gln	Arg	Ser	Leu	Ser	Ala	Lys	Cys	Val	Ser
			100						105				110		
Gly	Thr	Gly	Gln	Val	Ser	Thr	Cys	Arg	Leu	Arg	Lys	Asp	Gln	Gln	Ala
		115					120					125			
Glu	Asp	Asp	Glu	Asp	Asp	Glu	Leu	Asp	Val	Thr	Glu	Glu	Glu	Asn	Phe
	130					135					140				
Leu	Lys														
145															

<210> 5925

<211> 4538

<212> DNA

<213> Homo sapiens

<400> 5925

gctagccagc tgtgtgaggg ccgttgccctt atctgagctc tgagttatatt agtttttaaat
 60
 ggaaacaaga ccccgccaga cagcaggaa aacacaaatc cctatcagat cagcagccat
 120
 ggacgtggag acgtggcctt tgccctctg tcccagcgcc cggcctgtgt agttggactt
 180
 ggcagtgtgc agcgctagaa aggaattgtc tgacccagc attgcttcct ggctcctttc
 240
 ttcttttttc aggagagcat cctgccgacc acagccctcc ccaactgtgag ccttctgac
 300
 agcctcatcg cgccccctac cgccccatcc ctgggtcaca tggatgagca gggctgtgaa
 360
 cacacctccc ggactgagga ccggtttatc cagccacagg acttcgggtcc ctcagagccg
 420
 ccaactgagtg tcccgcagcc ctctctcctt gtcttcacca tgcccctgct gtctccagc
 480
 cccgccccac cgcccatctc ccccggttta ccattagttc ctctctctgc cactgccttg
 540
 aaccccccg ctcacccac ctccatcag ccacagaagt ttgctggagt caacaaagcg
 600
 ccgtctgtca tcacccacac ggcctctgcc accctcacc acgatgcccc cgccaccacc
 660
 tttagccaga gtcagggcct tgtgatcacc accatcacc ctgccccgtc agcggccccct
 720
 tgtgggctgg cactgtctcc tgtaaccgg cctccccagc cagggttaac ttttgtgcac
 780
 cccaaacctg tctccttgac tgggggcagg cctaagcagc ccacaaaaat agtgcctgct
 840
 cccaaaccag agcccggtgc cttggtgttg aagaatgccc gtatcgcccc agctgccttt
 900

tcaggccaac cacaagcggg gatcatgacg tcagggcctc tgaagagaga agggatgttg
960
gcctccaccg tgtcccagtc caacgtgggc attgcgcctg ctgccatcgc cagggtcctc
1020
ggggtcccgg agttccacag cagcatcctg gtgacagatc tcggccatgg caccgagcagc
1080
ccgcttgcgc ccgtctcccg gctcttccca agcacagcgc aagacccctt ggggaagggc
1140
gagcagggtc cgctgcatgg gggcagcccc cagggtcactg tcacagggcc cagtcgggac
1200
tgcccaaact cagggcaggc ctctccgtgt gcacgcggagc agagccccag tcctcaatct
1260
ccccagaaca actgctcagg gaaatccgac cccaaaaatg tggctgcact aaagaaccgg
1320
cagatgaagc acatctcagc tgagcagaaa aggcgcttca acatcaagat gtgcttcgac
1380
atgctcaaca gctcatctc caacaattcc aagctgacca gtcacgcat cacttgacg
1440
aagactgtgg agtacatcac caagctgcag caggagagag gccagatgca ggaggaggcc
1500
cggcggtgct gggaggagat cgaggagctc aatgccacca tcatctcctg ccagcagctg
1560
ctccttgcca cgggagtccc cgttaccggt cgccagtttg atcacatgaa agacatgttt
1620
gacgaatacg tgaaaaccgg gaccttgacg aattggaagt tctggatttt cagcatcatc
1680
atcaagccgc tgtttgagtc gttcaagggc atggtgtcca ccagcagcct ggaggagctg
1740
caccggacgg cgctctcctg gctggaccag cactgctccc tgcccacct caggccgatg
1800
gtattgagca cgctgcggca gctgagcacc tccacctoca tcctcacaga ccgggcacag
1860
ctgccagagc aggcgtccaa ggctgtcacc aggattggca agagattggg agagtccatg
1920
ctgcttagct ggcattgtggc cgcatgagat gccaggagac ccttcctgct ccatggagag
1980
taggctgcgc ccccagccc ttcttgacgc tcagcctcgg ggctctctc caactctgcc
2040
ggcccaccgt ggcacgggga ggccatgctc aggtctgaag caggtttggg gcctgctgac
2100
agcaatagcc cgcctttggg aacccttgct tgtgaactct ctactcagt gacctcagtc
2160
accaacctcc tctgcctcgg gggcagccca caaaaaggg aagtgtgtggc cgtgctggtc
2220
ctgcccgtgt ggtggcctgc cgggcctggc gccggtgagc ggaatcgatg ggatgagggg
2280
gacagggcct gctcctgtcc tgaggcccg ccttgctcct cctgccacgt cctgtccaca
2340
tgcatgcctc tgctgatgc cctgtccac tctctggtct gcccggtggg cagttggaag
2400
ggtcttttcc ttctcccctc aactctgaca gcaccagcc cttgtggatg gacttgggct
2460
tctattcagg cttatgcatg gcaggctgcc agggggaagt gccttcttca gaggtcctcc
2520

aggacacatg tgtgcagaaa cggatggatgt ggaacacaca ggaccagaat ggaagcgtgt
2580
gatgcacggg ggctgctctg gctgagaggc cctgctgggc atgtttcatc tgtccctttt
2640
tagctccacc tgacattgca ggatccatgg ggactcagcc cagggccttc tcggatgtca
2700
cctcaccgct gtggcccttc tgccgttctt ctccacttgg ctccagctgc agctgttgac
2760
agatcaagca tgtcctgtgg gagcttagaa cctgaagtt ctagtgtctg aaagatcaga
2820
ctccacgtcc tgctgtcagc cttgtcatct tgtctgatgt ctttcagctg ggagcccaa
2880
accaggacag ttctcggacc aaagatgcc ccacactcaa aagtctgtcc cgtcttgtgt
2940
ttggagaagg aaacaatgtt ggcaggcagc actctgtggt ggctagccct cagagctgtt
3000
tctaggcatc tctcagatca gacagcaaag aatctaccca gatctgggct gggaggaggt
3060
gtggctgggc tgggggcat tctgagcctg cagtgagagt ttggccagc ctcatcctt
3120
gctcttctct ggctacctct gcaggagct gcaggggcaa gcactctctc cagcactcag
3180
gaagcccggc cgagggtacc tcctcgtgga aagaatgcac tttaaagctc tgcctgaggag
3240
ttcggagccc aggccttcag gcgacctctg ccctccctgc ctctcctcac cctccctctc
3300
ttctcgcagg gcctgggaag ggctttgagg gagcctggga gccatgtgaa gaggggcacg
3360
cctgggctgt cccacagttt agatccagtt ggaggttctc cctggctcct gcaggcctgc
3420
ggggatctct ccccacttca ggctccggc cagctgcctg ccctcttgte tgtgcttcag
3480
ccctgcacaa aagcagcttg gtgacaccac tcagccacc agagtacgtg ttacaggct
3540
ttccagatca ccttctgtg gggtaacgt aatgaggcgg ggctggctct tggaaatttc
3600
cctggaaaat ggtaacagac tccatccttg acccggggat gagcatgaag gcattgtccc
3660
aaaggcagag gccaccgtgg taggaattcc accaaggcca gaagggaata aggaagaacc
3720
cacctgtctt ggctgtgcgg gccctgggga gggctgtgag tgcagccct ctctacttcc
3780
gtgcctttgt aaaacgtgta gataaccgca gtggttggt gagccaagaa ctctcctaaa
3840
tcagtggctt tctccccacc ccttgcctgg gagtcatttt taaaaaatc tgtgggatat
3900
aaaattggcc tcctgtgtct tcagcctacc tctccctctg ctgacttaat gtcgtgattc
3960
tgtttcttca gatatttaag gctgttaggt tgtgtgagcc ttgaagtgtg tgtgtgtgtc
4020
ccagcgactg tccactgtcc aggagatgca tgtctttgta ttggagatat ttctgtaact
4080
cattctcttg gtgtcacga ttgccatggc catagggcca cagtgcctga tctgtgcag
4140

acatgattgt ttcttgttct agaggtttct ttgttttoga atcttgectg atgaatccag
 4200
 ccagaccaag gggcctagat ttgacctctg tcttgggctc ctggggccagg tgcaggaaca
 4260
 tctgaggcca ctctgctggc cacctccagt ggggtgctgac cacaggatgg gctttgttta
 4320
 cactcatttt caccctgatt ctgccccca ctttcataaa agaaacttca aaatgctgac
 4380
 gctttggaga gtaagaaaat caatcttggc tgggcacggt ggctcctgcc tgtgaccta
 4440
 gcactttggg aggctgaagc tgaaggatca cttgagctca ggagttggag accaaccctg
 4500
 gcaacataac aagaccctgt ctctacaaaa aaaaaaaaa
 4538

<210> 5926

<211> 526

<212> PRT

<213> Homo sapiens

<400> 5926

Met	Asp	Glu	Gln	Gly	Cys	Glu	His	Thr	Ser	Arg	Thr	Glu	Asp	Pro	Phe
1				5					10					15	
Ile	Gln	Pro	Thr	Asp	Phe	Gly	Pro	Ser	Glu	Pro	Pro	Leu	Ser	Val	Pro
			20					25					30		
Gln	Pro	Phe	Leu	Pro	Val	Phe	Thr	Met	Pro	Leu	Leu	Ser	Pro	Ser	Pro
		35					40					45			
Ala	Pro	Pro	Pro	Ile	Ser	Pro	Val	Leu	Pro	Leu	Val	Pro	Pro	Pro	Ala
		50				55					60				
Thr	Ala	Leu	Asn	Pro	Pro	Ala	Pro	Pro	Thr	Phe	His	Gln	Pro	Gln	Lys
65					70					75				80	
Phe	Ala	Gly	Val	Asn	Lys	Ala	Pro	Ser	Val	Ile	Thr	His	Thr	Ala	Ser
			85						90					95	
Ala	Thr	Leu	Thr	His	Asp	Ala	Pro	Ala	Thr	Thr	Phe	Ser	Gln	Ser	Gln
			100					105					110		
Gly	Leu	Val	Ile	Thr	Thr	His	His	Pro	Ala	Pro	Ser	Ala	Ala	Pro	Cys
		115					120					125			
Gly	Leu	Ala	Leu	Ser	Pro	Val	Thr	Arg	Pro	Pro	Gln	Pro	Arg	Leu	Thr
		130				135					140				
Phe	Val	His	Pro	Lys	Pro	Val	Ser	Leu	Thr	Gly	Gly	Arg	Pro	Lys	Gln
145					150					155				160	
Pro	His	Lys	Ile	Val	Pro	Ala	Pro	Lys	Pro	Glu	Pro	Val	Ser	Leu	Val
			165						170					175	
Leu	Lys	Asn	Ala	Arg	Ile	Ala	Pro	Ala	Ala	Phe	Ser	Gly	Gln	Pro	Gln
			180					185					190		
Ala	Val	Ile	Met	Thr	Ser	Gly	Pro	Leu	Lys	Arg	Glu	Gly	Met	Leu	Ala
		195					200					205			
Ser	Thr	Val	Ser	Gln	Ser	Asn	Val	Val	Ile	Ala	Pro	Ala	Ala	Ile	Ala
		210				215					220				
Arg	Ala	Pro	Gly	Val	Pro	Glu	Phe	His	Ser	Ser	Ile	Leu	Val	Thr	Asp
225					230					235				240	
Leu	Gly	His	Gly	Thr	Ser	Ser	Pro	Pro	Ala	Pro	Val	Ser	Arg	Leu	Phe
			245						250					255	
Pro	Ser	Thr	Ala	Gln	Asp	Pro	Leu	Gly	Lys	Gly	Glu	Gln	Val	Pro	Leu

	260		265		270
His Gly Gly Ser Pro Gln Val Thr Val Thr Gly Pro Ser Arg Asp Cys					
275			280		285
Pro Asn Ser Gly Gln Ala Ser Pro Cys Ala Ser Glu Gln Ser Pro Ser					
290			295		300
Pro Gln Ser Pro Gln Asn Asn Cys Ser Gly Lys Ser Asp Pro Lys Asn					
305			310		315
Val Ala Ala Leu Lys Asn Arg Gln Met Lys His Ile Ser Ala Glu Gln					
325			330		335
Lys Arg Arg Phe Asn Ile Lys Met Cys Phe Asp Met Leu Asn Ser Leu					
340			345		350
Ile Ser Asn Asn Ser Lys Leu Thr Ser His Ala Ile Thr Leu Gln Lys					
355			360		365
Thr Val Glu Tyr Ile Thr Lys Leu Gln Gln Glu Arg Gly Gln Met Gln					
370			375		380
Glu Glu Ala Arg Arg Leu Arg Glu Glu Ile Glu Glu Leu Asn Ala Thr					
385			390		395
Ile Ile Ser Cys Gln Gln Leu Leu Pro Ala Thr Gly Val Pro Val Thr					
405			410		415
Arg Arg Gln Phe Asp His Met Lys Asp Met Phe Asp Glu Tyr Val Lys					
420			425		430
Thr Arg Thr Leu Gln Asn Trp Lys Phe Trp Ile Phe Ser Ile Ile Ile					
435			440		445
Lys Pro Leu Phe Glu Ser Phe Lys Gly Met Val Ser Thr Ser Ser Leu					
450			455		460
Glu Glu Leu His Arg Thr Ala Leu Ser Trp Leu Asp Gln His Cys Ser					
465			470		475
Leu Pro Ile Leu Arg Pro Met Val Leu Ser Thr Leu Arg Gln Leu Ser					
485			490		495
Thr Ser Thr Ser Ile Leu Thr Asp Pro Ala Gln Leu Pro Glu Gln Ala					
500			505		510
Ser Lys Ala Val Thr Arg Ile Gly Lys Arg Leu Gly Glu Ser					
515			520		525

<210> 5927

<211> 1786

<212> DNA

<213> Homo sapiens

<400> 5927

ctccacactt tatttttgct ggctggattt gtcattttgc tgtcagaaca ggcctacaac
60
atacctcaga tgtttttcct ttacctgtc attctgagca aaagcatgac tccatcacct
120
gtctgggcac ataccgagtc tttgtctgga tgggtgcagc acatectgca cactcagcgg
180
caacctgaa aataacatct accacctgcc aggcaattgg ctgactgect cegtgatctt
240
caggggcac gagggacaat gtatttagtc atgcacctct gtaagtgcag ggaaatgtac
300
tgggacacct ttcgattccc aaggaaataa aaggaaaatg acaaacacat agtcacgctg
360
tggatccctg tttattccca tctctgggca ggctgtaaa gagcatcgac ccaggtctca
420

accccactgc tggtaactga gccacagaaa ctgtaagcaa gtgacactca tccagggaga
 480
 actactcccc taaaccggtt cttagccagc aagagaggcc cacaggaagg tctctgataa
 540
 cctgaagttt tgaaaagctt agaactgtgt gatcaggcca tatgcccctc agttcctgaa
 600
 tgttcactac cctgtggtgt ccctttgcca tggaaagagac tccaaccaca cacatcagtt
 660
 aagctgccaa cactgtttcc tccccattct gctctgcgaa caacgcacag tccagccagg
 720
 agctcaacag ggaggggtttt cttgttgtgt catggctgag atcaaagtca ttgtacacca
 780
 aggacatagt ggacagaagg gagccaacaa catttatgcc aaatcccatt cccaagatga
 840
 ctatatatta tagtttatta tgaggttaact gcctccagac agataagccc ctgcatgatg
 900
 ctgaaagtca gagcctgggg gtgaatgcc ccttatcttt gtctctctca gctggtctgc
 960
 gtgtctctgc tcagaacgct gtgtagtagt gctccattgt gctgacaatg tcactctggt
 1020
 cctccaggag ctccagaact tgctgcagca cagcctcgct caggcccggg cggatgctca
 1080
 ggcgagcaca ggccaagatg tgcaggaagt gacagccctt ctccatgtga tttggtttct
 1140
 ggcatctctg ctgaatgatc cggtggtatc ttctgtgcag gtctttgtct tctctggtta
 1200
 catagtatag gttatcaaaa ccatcatctt tctggaaaac aagtcctttt tcctgcagca
 1260
 gttgtatagc attcttaaat atactatgaa ttgccttgga agtgggtgtcc ttcttaaaat
 1320
 tcacttggtc ggagcaggca ctgtgaatca caggctgatt ggcaaggagc agcaaagact
 1380
 cgaccatttc cagctctctg tggtaaaagc tctgcactct gttctccatg aggaattctt
 1440
 tggctttttc actcagcaaa ctctgagac tggggagggtc cagggcgcct ggattgctta
 1500
 gtgctcttcc tttctctagg gctgagctgt gaaaaggctg gtcataaact ttctgtaga
 1560
 tagtgggcag ctcaagcatc cttgcaattt gaatgttcca cactgggtcg tccactttat
 1620
 agtaagcggg ggcataaact tctcgctctt ctctgtatgt gcggatactg cctctgactc
 1680
 ggatcgtgtc ccgcatctct atctttgttt tctgtcaat ggtctcttgt agcttcttaa
 1740
 gttgtgaggt taagctgagc tctcttgctg cacttgagc agccct
 1786

<210> 5928

<211> 202

<212> PRT

<213> Homo sapiens

<400> 5928

Met Leu Glu Leu Pro Thr Ile Tyr Arg Lys Val Tyr Asp Gln Pro Phe

```

      1             5             10             15
His Ser Ser Ala Leu Glu Lys Glu Glu Ala Leu Ser Asn Pro Gly Ala
      20             25             30
Leu Asp Leu Pro Ser Leu Thr Ser Leu Leu Ser Glu Lys Ala Lys Glu
      35             40             45
Phe Leu Met Glu Asn Arg Val Gln Ser Phe Tyr Gln Gln Glu Leu Glu
      50             55             60
Met Val Glu Ser Leu Leu Ser Leu Ala Asn Gln Pro Val Ile His Ser
      65             70             75             80
Ala Cys Ser Asp Gln Val Asn Phe Lys Lys Asp Thr Thr Ser Lys Ala
      85             90             95
Ile His Ser Ile Phe Lys Asn Ala Ile Gln Leu Leu Gln Glu Lys Gly
      100            105            110
Leu Val Phe Gln Lys Asp Asp Gly Phe Asp Asn Leu Tyr Tyr Val Thr
      115            120            125
Arg Glu Asp Lys Asp Leu His Arg Lys Ile His Arg Ile Ile Gln Gln
      130            135            140
Asp Cys Gln Lys Pro Asn His Met Glu Lys Gly Cys His Phe Leu His
      145            150            155            160
Ile Leu Ala Cys Ala Arg Leu Ser Ile Arg Pro Gly Leu Ser Glu Ala
      165            170            175
Val Leu Gln Gln Val Leu Glu Leu Leu Glu Asp Gln Ser Asp Ile Val
      180            185            190
Ser Thr Met Glu His Tyr Tyr Thr Ala Phe
      195            200

```

<210> 5929

<211> 606

<212> DNA

<213> Homo sapiens

<400> 5929

```

nngcgcgcgcg ccgcgtcccc agacaaaggc ttggccggcg gccccggccc gctgcgcctt
60
cgctccccgc ctccccagct cttctccgct cctccccccc gcgcttggtt cggcgcgctc
120
cggcccgccg caaagtttcc cggggcgagc cggcggtgct gcctcgttcc agcgatggcc
180
gcggagctga gcatggggcc agagctgccc accagcccgc tggccatgga gtatgtcaac
240
gacttcgacc tgctcaagtt cgacgtgaag aaggagccac tggggcgcgc ggagcgtccg
300
ggcaggccct gcacacgcct gcagccagcc ggctcggtgt cctccacacc gctcagcact
360
ccgtgtagct ccgtgccctc gtcgcccagc ttcagcccca ccgaacagaa gacacacctc
420
gaggatctgt actggatggc gagcaactac cagcagatga accccgaggc gctcaacctg
480
acgcccaggg acgcggtgga agcgctcatc ggctcgcacc cagtgccaca gccgctgcaa
540
agcttcgaca gctttcgagg cgctcaccac caccaccatc accaccaccc tcaccgcac
600
cacgcg
606

```

<210> 5930
 <211> 144
 <212> PRT
 <213> Homo sapiens

<400> 5930
 Met Ala Ala Glu Leu Ser Met Gly Pro Glu Leu Pro Thr Ser Pro Leu
 1 5 10 15
 Ala Met Glu Tyr Val Asn Asp Phe Asp Leu Leu Lys Phe Asp Val Lys
 20 25 30
 Lys Glu Pro Leu Gly Arg Ala Glu Arg Pro Gly Arg Pro Cys Thr Arg
 35 40 45
 Leu Gln Pro Ala Gly Ser Val Ser Ser Thr Pro Leu Ser Thr Pro Cys
 50 55 60
 Ser Ser Val Pro Ser Ser Pro Ser Phe Ser Pro Thr Glu Gln Lys Thr
 65 70 75 80
 His Leu Glu Asp Leu Tyr Trp Met Ala Ser Asn Tyr Gln Gln Met Asn
 85 90 95
 Pro Glu Ala Leu Asn Leu Thr Pro Glu Asp Ala Val Glu Ala Leu Ile
 100 105 110
 Gly Ser His Pro Val Pro Gln Pro Leu Gln Ser Phe Asp Ser Phe Arg
 115 120 125
 Gly Ala His His His His His His His Pro His Pro His His Ala
 130 135 140

<210> 5931
 <211> 478
 <212> DNA
 <213> Homo sapiens

<400> 5931
 nggagatggc ggagtcgctt gaggtctccg cgccgctccc tgtacaaact ggtgggctcg
 60
 ccgccttgga aagaggcttt ccggcagaga tgccctggaga gaatgagaaa cagccgggac
 120
 aggtccttaa acaggtaccg ccaggctgga agcagtgggc caggggaattc tcagaacagc
 180
 tttctagttc aagagggtgat ggaagaagag tggaatgctt tgcagtcagt ggagaattgt
 240
 ccagaagact tggctcagct ggaggagctg atagacatgg ctgtgctgga ggaaattcaa
 300
 caggagctga tcaaccaagg tacaacctga gaatcacaag cgggtgtggtg gtgtgtcagt
 360
 gtggcctgtc catcccatct cattcttctg agttgacaga gcagaagctt cgtgcctgtt
 420
 tagagggtag tataaatgag cacagtgcac attgtcccca cacacccctt tcacgcgt
 478

<210> 5932
 <211> 109
 <212> PRT
 <213> Homo sapiens

<400> 5932
 Xaa Arg Trp Arg Ser Arg Leu Arg Ser Pro Arg Arg Ser Leu Tyr Lys
 1 5 10 15
 Leu Val Gly Ser Pro Pro Trp Lys Glu Ala Phe Arg Gln Arg Cys Leu
 20 25 30
 Glu Arg Met Arg Asn Ser Arg Asp Arg Leu Leu Asn Arg Tyr Arg Gln
 35 40 45
 Ala Gly Ser Ser Gly Pro Gly Asn Ser Gln Asn Ser Phe Leu Val Gln
 50 55 60
 Glu Val Met Glu Glu Glu Trp Asn Ala Leu Gln Ser Val Glu Asn Cys
 65 70 75 80
 Pro Glu Asp Leu Ala Gln Leu Glu Glu Ile Asp Met Ala Val Leu
 85 90 95
 Glu Glu Ile Gln Gln Glu Leu Ile Asn Gln Gly Thr Thr
 100 105

<210> 5933

<211> 1953

<212>—DNA

<213> Homo sapiens

<400> 5933
 atggagatcc gagagaaggg ctccgagttc ctgaaggagg agctgcacag agcgcagaag
 60
 gagctgaagc taaaggacga ggaatgtgag cggctgtcca aggtgcggga gcagctagaa
 120
 caggagctgg aagagctgac ggccagcctg tttgaggaag ctacaagat ggttcgagaa
 180
 gccaacatga agcaggcggc atcagaaaag cagctgaagg aggctcgggg caagatcgac
 240
 atgctgcagg cagaggtgac agccttgaag acaactgtca tcacgtccac accagcctct
 300
 cccaaccgag agcttcaccc ccagctgctg agccccacca aggccggggc ccgaaagggc
 360
 cactctcgcc acaagagcac cagcagcacc ctctgccccg ccgtgtgtcc cgctgcggga
 420
 cacaccetca cccagacag agagggcaag gaggtggaca caatcctgtt tgcagagttc
 480
 caggcctgga gggaatcccc caccctggac aagacctgcc ccttcctgga aagggtgtac
 540
 cgagaggacg tgggcccctg cctggacttc acaatgcagg agctctcggg gctggtacgg
 600
 gccgcccgtg aggacaacac gctcaccatt gagccggtgg cttcgcagac gctgccaca
 660
 gtgaaggtgg ccgaggttga ctgtagcagc accaaccat gtgccctgag cgggctgacc
 720
 cgcacctgcc gccaccgaat ccggctcggg gactccaaaa gccattacta catctcgcca
 780
 tcttcccggg ccaggatcac cgcagtgtgc aacttcttca cctacatccg ctacatccag
 840
 caaggcctgg tggggcagga cgcagagccc atgttctggg agatcatgag gttgcggaag
 900
 gagatgtcac tggccaagct cggcttcttc cccagaggag cttagggcgc ggcccaggcc
 960

tgaaggggag ctctgagaca gagcaaacac ccaccccaga acaagccgac acacagggag
 1020
 acggggggcct ggagccagcc ctgagccaga ggcagaatgg atggacagac aggccatgga
 1080
 ggcagcactg agccagcacc aacagtecat cctgggacag acgggcctgg acttcacggc
 1140
 aagaccccc tctcttcccc actgggttct gccaccacca ggaggatttc aagaaagcac
 1200
 caaagaccag ggagctcgga tccatactcg gggggcctca gcccttggga ggggacacct
 1260
 gaggcagcca gcgccccctc cccagtcccc agaactgcct gcaggtgcct tgttgctggc
 1320
 ttgtcttcag aaagggactg ttctgggtgg ctggatctcc aggggtacct ccacccagc
 1380
 tgccaagccc tgggccagca gcacccctt gtggccatcc tgtgccttgt tcccggtggc
 1440
 ctccctattg gactactagg aggggctggc agggcctcca tagcacagaa ttgccccaaa
 1500
 gccttggttaa gatgagtcaa gacccctccc ccgttctctc ccttcttttc ccccttctc
 1560
 cctccccctt cataaagccc tcccttgta ccttccctcc caccocgtct cagccctgtg
 1620
 ctcttgaggg ccctgtctcc aaaaccgtg gaaggactgg ggcactttct gccacagtag
 1680
 aacacagaca gggcttcaga tcacccacgc ctgttttcag ctgtgggtgg ccatgcagac
 1740
 acgcgccttg gcatgtgggg cctgggtggg caggcaggac ctgggccctc ccacccatca
 1800
 gageccactc aggaccagcg ttcggagctc ccacctggac gcacccctca ccacgtccgg
 1860
 atttcttct ttggatggaa tgtaacgca tctctattta ataaaggcag gctttgttgg
 1920
 tacaggcaaa aaaaaaaaaa aaaaaaaaaa aaa
 1953

<210> 5934

<211> 314

<212> PRT

<213> Homo sapiens

<400> 5934

Met Glu Ile Arg Glu Lys Gly Ser Glu Phe Leu Lys Glu Glu Leu His
 1 5 10 15
 Arg Ala Gln Lys Glu Leu Lys Leu Lys Asp Glu Glu Cys Glu Arg Leu
 20 25 30
 Ser Lys Val Arg Glu Gln Leu Glu Gln Glu Leu Glu Glu Leu Thr Ala
 35 40 45
 Ser Leu Phe Glu Glu Ala His Lys Met Val Arg Glu Ala Asn Met Lys
 50 55 60
 Gln Ala Ala Ser Glu Lys Gln Leu Lys Glu Ala Arg Gly Lys Ile Asp
 65 70 75 80
 Met Leu Gln Ala Glu Val Thr Ala Leu Lys Thr Leu Val Ile Thr Ser
 85 90 95
 Thr Pro Ala Ser Pro Asn Arg Glu Leu His Pro Gln Leu Leu Ser Pro

```

      100      105      110
Thr Lys Ala Gly Pro Arg Lys Gly His Ser Arg His Lys Ser Thr Ser
      115      120      125
Ser Thr Leu Cys Pro Ala Val Cys Pro Ala Ala Gly His Thr Leu Thr
      130      135      140
Pro Asp Arg Glu Gly Lys Glu Val Asp Thr Ile Leu Phe Ala Glu Phe
145      150      155      160
Gln Ala Trp Arg Glu Ser Pro Thr Leu Asp Lys Thr Cys Pro Phe Leu
      165      170      175
Glu Arg Val Tyr Arg Glu Asp Val Gly Pro Cys Leu Asp Phe Thr Met
      180      185      190
Gln Glu Leu Ser Val Leu Val Arg Ala Ala Val Glu Asp Asn Thr Leu
      195      200      205
Thr Ile Glu Pro Val Ala Ser Gln Thr Leu Pro Thr Val Lys Val Ala
      210      215      220
Glu Val Asp Cys Ser Ser Thr Asn Thr Cys Ala Leu Ser Gly Leu Thr
225      230      235      240
Arg Thr Cys Arg His Arg Ile Arg Leu Gly Asp Ser Lys Ser His Tyr
      245      250      255
Tyr Ile Ser Pro Ser Ser Arg Ala Arg Ile Thr Ala Val Cys Asn Phe
      260      265      270
Phe Thr Tyr Ile Arg Tyr Ile Gln Gln Gly Leu Val Arg Gln Asp Ala
      275      280      285
Glu Pro Met Phe Trp Glu Ile Met Arg Leu Arg Lys Glu Met Ser Leu
      290      295      300
Ala Lys Leu Gly Phe Phe Pro Gln Glu Ala
305      310

```

<210> 5935

<211> 2727

<212> DNA

<213> Homo sapiens

<400> 5935

```

nngtcgcttc cgcctgatcc ccggcctgtc ggccgacccc acctcgccaa ccgaggcggg
60
ccgcggagtg tgcgaacgac ccacccgctg ctttctcttc cccagatca cgcaccccag
120
ctccggaata tggggaactg cctcaaatacc ccacctcgg atgacatctc cctgcttcac
180
gagttctcagt ccgaccgggc tagctttggc gaggggacgg agccggatca ggagccgccc
240
ccgccatata aggaacaagt tccagttcca gtctaccacc caacacctag ccagactcgg
300
ctagcaactc agctgactga agaggaacaa attaggatag ctcaaagaat aggtcttata
360
caacatctgc ctaaaggagt ttatgaccct ggaagagatg gatcagaaaa aaagatccgg
420
gagtgtgtga tctgtatgat ggactttggt tatggggacc caattcgatt tctgccgtgc
480
atgcacatct atcacctgga ctgtatagat gactggttga tgagatcctt cacgtgcccc
540
tctgcacatg agccagtga tgcagcactg ctttcatcct atgagactaa ttgagccagg
600

```

gtctcttatac tgacttcaag tgaaccacca ttttggtggt tttgatcttt tgtcactgag
660
cccaaagagc cagggattag gaattaagat cgtgcacaaa agtttcctta aaattcctgg
720
atggctgcag atgttggggg aaaaagtacg tgatatttta gaaacttagt gggaaaagta
780
ggatgggtatt tttatgtaaa gccttgaccc aatgtttaaa aatataattg tatttagatc
840
ttgttattgc tccagtacat aggaattgtg taaagtgtta acagcagctg tatttgttta
900
aattgtgtgt attgaagatt agggaaaaga tagtagttat ttttcctaaa tgaaataact
960
ttcttctctt ccccttcccc accegaattc ttttctgaag ttgctggcat ttgggtcaag
1020
gttttattaa aagctacatt ttataacact ggcacacaca aaaaagtagt ttaagcttg
1080
tttgacagct tctttttttc cattggaaat ggaattcatt gccttaggtc tttttaaata
1140
gtgtattatt atcgttgggg ctggctctat gcttgaaaac cagtttattt ataacctgtt
1200
ataagtcta tattctgttt gcagtttaga aatgcagaat tcaaagtgat ctcttagctt
1260
gtaagcaaac tgagatgcac tatccctttt ctataaaaaa taagttaatg tgtcaagaaa
1320
ccaactctat taagggtggg tttaatatta ccttttccta tgtgttttat ctaattattt
1380
tggttgtaa tatggtgata atggaaagtc aagttaaatt ttaaatatta agaattctga
1440
tttattgaga ttgaattatg ccaccacgtt tatgtaaaaa tgaagggtggc accgtggtga
1500
gacctaatga gaaatagtta ctcaattgta aaaattttga tttattctct ttcttctgac
1560
ctccttgctt cttgtcttga accatagcaa aaggatactg catctctcat tactgtagt
1620
ctgaggttat tgaagttata caaaacacat ctcaattctt gtttcttga aaggatctta
1680
ttacatcctg ctagctgact gacaaaacta agcagggaga ataaagataa ttgtatttta
1740
tgttttgac acaaacgcag aatttgata accatattgac ttcattagttg tgatctcaaa
1800
aaagaaggaa tttctccttt gtttcttgca gttaatgtta gaatacttta aatctctaag
1860
cttctgaagt gtttagagga gagatggctt agtaaagatg tagtagtaat gttttatcca
1920
tttagcatgt gtttattttt tcatatgtac tcaaagggtga cttattgggt cacctcagt
1980
atattacagc taaaaaaatc attcattagc aaaaggaaaa gtggctctca cctaacatca
2040
gaagtgtttc ttattattat tttatattga gttgaatatt gaactctaac agttttctac
2100
atacaaaaca cagtgtcatg aaggttattc ataattgcat tatagaggaa ttagtatgt
2160
cataagtact ttgtaaagat ttgacattca actgtagtat ccatatgttg cttaaatttc
2220

cttatgagcc ccatgatgga aagacttaaa gatgaatttg agaaaaattg aaagaaatta
 2280
 gattatcagg ttctgttaaa ttgttacatg tatcttgctt aaatttctgt ttattaattt
 2340
 atatccaccc aagtacataa agcaaatttg gaggaacaa ctgaagttgt gcaatatatt
 2400
 ctgataattg ctttttttat tcttggtgtt tctacttaaa cataatgtct gtgtcatcaa
 2460
 gtattatagt cagacttttc ttttttcta gattgttaaa attggcaaatt gaactttttt
 2520
 aaaaatcatc ttccatgttg cagttagtct ttcttttcat tacaagtctt tcacagaagt
 2580
 ttggtggtaa tattgaaaga actagcattg ggcagaatgt gtctttttta ggcactttat
 2640
 attctcaaca tacaatgtta agaaccatca attttgactt ttactaagtt gttaaataaa
 2700
 gttataatac agctgtgaaa aaaaaaa
 2727

<210> 5936

<211> 154

<212> PRT

<213> Homo sapiens

<400> 5936

Met	Gly	Asn	Cys	Leu	Lys	Ser	Pro	Thr	Ser	Asp	Asp	Ile	Ser	Leu	Leu
1				5					10					15	
His	Glu	Ser	Gln	Ser	Asp	Arg	Ala	Ser	Phe	Gly	Glu	Gly	Thr	Glu	Pro
			20					25					30		
Asp	Gln	Glu	Pro	Pro	Pro	Pro	Tyr	Gln	Glu	Gln	Val	Pro	Val	Pro	Val
		35					40					45			
Tyr	His	Pro	Thr	Pro	Ser	Gln	Thr	Arg	Leu	Ala	Thr	Gln	Leu	Thr	Glu
	50					55					60				
Glu	Glu	Gln	Ile	Arg	Ile	Ala	Gln	Arg	Ile	Gly	Leu	Ile	Gln	His	Leu
65				70					75					80	
Pro	Lys	Gly	Val	Tyr	Asp	Pro	Gly	Arg	Asp	Gly	Ser	Glu	Lys	Lys	Ile
			85						90					95	
Arg	Glu	Cys	Val	Ile	Cys	Met	Met	Asp	Phe	Val	Tyr	Gly	Asp	Pro	Ile
		100						105					110		
Arg	Phe	Leu	Pro	Cys	Met	His	Ile	Tyr	His	Leu	Asp	Cys	Ile	Asp	Asp
	115					120						125			
Trp	Leu	Met	Arg	Ser	Phe	Thr	Cys	Pro	Ser	Cys	Met	Glu	Pro	Val	Asp
	130					135					140				
Ala	Ala	Leu	Leu	Ser	Ser	Tyr	Glu	Thr	Asn						
145						150									

<210> 5937

<211> 1536

<212> DNA

<213> Homo sapiens

<400> 5937

naagcttttag tgattgtggc ttattcacag ctattctttg ctgcaacctg attgaaaatg
 60

ttcagagatt aggettgaca cccaccactg tcattagatt aaataaacat cttttgagtc
120
tttgcacag ttatctcaag gtctgagacc tgtggttgtc gaacccagc ggactttagt
180
agtactcaga tctctctttg tttggtgctg agtatattaa caagtaaacc tgcctgtatg
240
ctcaccagaa aggaaacaga gcatgtcagt gctttgatcc ttagagcctt tttgcttaca
300
attccagaaa atgctgaagg ccacatcatt ttaggaaaga gttaattgt accttttaa
360
gggtcaagag ttatagatcc cactgtatta cctgggatac tcattgaaat gtcagaagtt
420
caattaatga ggctattacc tatcaaaaaa tcaactgccc tcaagggtggc actcttttgt
480
acaactttat ccggagacac ttctgacact ggagaaggaa ctgtggtggt cagtatatggg
540
gtttctcttg aaaatgcagt cttggaccag ctgcttaacc taggaaggca gctaatacgt
600
gaccacgtag atcttgctct gtgccaaaaa gttatacatc catctttgaa gcagtttctc
660
aatatgcac gtattattgc catagacaga attggagtga ctctgatgga acccctgact
720
aaaatgacag gaacacagcc tattggatcc ctaggctcaa tatgtcttaa tagttatgga
780
agtgtgaaag atgtgtgcac tgcaaaattt ggctccaaac atttttttca tcttattcct
840
aatgaagcaa caatctgcag cttgcttctc tgcaacagaa atgacactgc ctgggatgag
900
ctgaagctca cgtgtcacac ggcactgcat gtcctgcagt taacactcaa ggaaccatgg
960
gctttgttgg gaggtggctg tactgaaact catttggtg catatatcag acacaagact
1020
cacaacgacc cagaaagcat tctcaaagat gatgaatgta ctcaaacaga acttcaatta
1080
attgctgaag cattttgcag tgccctagaa tctgttgttg gctctttaga acatgatgga
1140
ggtgaaattc tcaactgacat gaagtatgga cacctttggt cagttcaggc agattctccc
1200
tgtgttgcta actggccaga tttgctttca cagtgtggtt gtggattata caatagccag
1260
gaagaactca actggtcttt cttaagaagc acacgtcgtc catttgtgcc acaaagctgc
1320
cttcacatg aagctgtggg ctccagccagc aacctgacct tggactgttt gactgcaaag
1380
cttagtggtc tacaggtggc tgtagagaca gccaatgtga ttttggatct ttcatatgtt
1440
attgaagata aaaactaaga gaatagcatg ttcgtattac aagagaaaca aataaactag
1500
tctgttgga attgaaaaaa aaaaaaaaaa aaaaaa
1536

<210> 5938

<211> 406

<212> PRT

<213> Homo sapiens

<400> 5938

```

Met Leu Thr Arg Lys Glu Thr Glu His Val Ser Ala Leu Ile Leu Arg
 1           5           10           15
Ala Phe Leu Leu Thr Ile Pro Glu Asn Ala Glu Gly His Ile Ile Leu
 20           25           30
Gly Lys Ser Leu Ile Val Pro Phe Lys Gly Ser Arg Val Ile Asp Ser
 35           40           45
Thr Val Leu Pro Gly Ile Leu Ile Glu Met Ser Glu Val Gln Leu Met
 50           55           60
Arg Leu Leu Pro Ile Lys Lys Ser Thr Ala Leu Lys Val Ala Leu Phe
 65           70           75           80
Cys Thr Thr Leu Ser Gly Asp Thr Ser Asp Thr Gly Glu Gly Thr Val
 85           90           95
Val Val Ser Tyr Gly Val Ser Leu Glu Asn Ala Val Leu Asp Gln Leu
 100          105          110
Leu Asn Leu Gly Arg Gln Leu Ile Ser Asp His Val Asp Leu Val Leu
 115          120          125
Cys Gln Lys Val Ile His Pro Ser Leu Lys Gln Phe Leu Asn Met His
 130          135          140
Arg Ile Ile Ala Ile Asp Arg Ile Gly Val Thr Leu Met Glu Pro Leu
 145          150          155          160
Thr Lys Met Thr Gly Thr Gln Pro Ile Gly Ser Leu Gly Ser Ile Cys
 165          170          175
Pro Asn Ser Tyr Gly Ser Val Lys Asp Val Cys Thr Ala Lys Phe Gly
 180          185          190
Ser Lys His Phe Phe His Leu Ile Pro Asn Glu Ala Thr Ile Cys Ser
 195          200          205
Leu Leu Leu Cys Asn Arg Asn Asp Thr Ala Trp Asp Glu Leu Lys Leu
 210          215          220
Thr Cys Gln Thr Ala Leu His Val Leu Gln Leu Thr Leu Lys Glu Pro
 225          230          235          240
Trp Ala Leu Leu Gly Gly Gly Cys Thr Glu Thr His Leu Ala Ala Tyr
 245          250          255
Ile Arg His Lys Thr His Asn Asp Pro Glu Ser Ile Leu Lys Asp Asp
 260          265          270
Glu Cys Thr Gln Thr Glu Leu Gln Leu Ile Ala Glu Ala Phe Cys Ser
 275          280          285
Ala Leu Glu Ser Val Val Gly Ser Leu Glu His Asp Gly Gly Glu Ile
 290          295          300
Leu Thr Asp Met Lys Tyr Gly His Leu Trp Ser Val Gln Ala Asp Ser
 305          310          315          320
Pro Cys Val Ala Asn Trp Pro Asp Leu Leu Ser Gln Cys Gly Cys Gly
 325          330          335
Leu Tyr Asn Ser Gln Glu Glu Leu Asn Trp Ser Phe Leu Arg Ser Thr
 340          345          350
Arg Arg Pro Phe Val Pro Gln Ser Cys Leu Pro His Glu Ala Val Gly
 355          360          365
Ser Ala Ser Asn Leu Thr Leu Asp Cys Leu Thr Ala Lys Leu Ser Gly
 370          375          380
Leu Gln Val Ala Val Glu Thr Ala Asn Leu Ile Leu Asp Leu Ser Tyr
 385          390          395          400
Val Ile Glu Asp Lys Asn

```

405

<210> 5939

<211> 795

<212> DNA

<213> Homo sapiens

<400> 5939

```

nnctgtctcc cctccgcct ctcctgcat tcttgttget tctgggtctt cctgggacc
60
ttatgtgcat tcgcctttcc ccaacgtgtc cttctctccc tcctctcat cctccgggag
120
gcgtgcgcct cctgcctctc cccggccggc cacacggtgg cgctgtgtcc cgctcgcccg
180
cccggccgcc gctcgccgc agcctgcaag cgcaaggaac aggagcagca gaaggagcgc
240
gccctgcagc ccaagaagca gcgcctggtg ttcaccgacc tgcagcgacg cacgctgac
300
gccatcttca aggagaacaa gcggccgtcc aaggagatgc aggtcaccat ctgcagcag
360
ctcggttg agtcaacac cgtcagcaac ttcttcatga acgcgcggcg ccgctgcatg
420
aaccgctggg ctgaggagcc cagcacggcc cccggggggc ccgcccggcg cacggccact
480
ttctccaagg cctgaggcgc cccggccccc cgccctccct gcctccacgg cctgggcgct
540
gtgccccac gtcacctccc cacatcctgc cgcccggag acccgcccc agggggcacc
600
tggagggggg gctatccggg cccccacac cgggggagg ggaagcagca cccccccag
660
cccaagtgca caaaaagggc ccccttct cctccatgc ccactccctc caggccaaag
720
gaagccctcc accccccccc ggaggggagg gagtgcaga aaggggttcc ccagccctc
780
ctccattcag gacgc
795

```

<210> 5940

<211> 96

<212> PRT

<213> Homo sapiens

<400> 5940

```

Cys Lys Arg Lys Glu Gln Glu Gln Lys Glu Arg Ala Leu Gln Pro
1      5      10      15
Lys Lys Gln Arg Leu Val Phe Thr Asp Leu Gln Arg Arg Thr Leu Ile
20      25      30
Ala Ile Phe Lys Glu Asn Lys Arg Pro Ser Lys Glu Met Gln Val Thr
35      40      45
Ile Ser Gln Gln Leu Gly Leu Glu Leu Asn Thr Val Ser Asn Phe Phe
50      55      60
Met Asn Ala Arg Arg Arg Cys Met Asn Arg Trp Ala Glu Glu Pro Ser
65      70      75      80
Thr Ala Pro Gly Gly Pro Ala Gly Ala Thr Ala Thr Phe Ser Lys Ala

```

5121

85

90

95

<210> 5941

<211> 2590

<212> DNA

<213> Homo sapiens

<400> 5941

tttttttttt tttttttttt ttaatcttct aagtcctttt aattgttctt ataaactagc
60
ataagatata aacttaagta gtacacatga gttttataat ttactaatct ctgacagata
120
gctaagcata gcacatcaga gcataacaca gtgtgagggg aataaagtgt acaatgacat
180
cttctattct ggacctaata attcaataga gaaagaacta cttgtagtca ctgtgggttac
240
agaagggttc atggacagcg aacataaagc tctactagct acaaatagg tcttaatgat
300
aaaaacgtgg gccttcagag aactaaaggt accaatgtgt ggcagtccaa aattacgagg
360
aaaatgagtt cccttcacgg gtcacatcag caattttttt tccccctttt gagacagagt
420
cttgcctctgc tgncccaggt tggagtgcag tggcatgac caggctcact gcaacctccg
480
cctccccggg tcaagcaatt ctcatgcctc agcctcccga gtagctggga ttacaggctgc
540
ctgtcatcac ggctggctac tttttgtatt tttagtagag acagggtttc accatgttgg
600
ccaggctggg ctcaaaactcc tgacctcaag tgatctgctt gcttcagcct cccaaagtgc
660
tagggttaca gacatgagcc actgtgccc a gctacctcat caattcttaa tctataaacc
720
atggataggc ttccgggagaa cccaagaacc aatgaaatct gttggttaagt tttatgtgtg
780
cggttttcta cagagagggg caacagcatg tatattttca aagaagtctg tgggtcaaaa
840
gagagtttat tgttagaagt ccttgggcaa tcaacttgga aaagggtgga ttgagaatgg
900
gggctgtcta gatcaggata atgttgaatt tgacctcac ttgaggcttt tgtacagagg
960
atgagaagac ggtaaattca agggttaatc agaaattaac accaacaatga cttggtgatg
1020
agtgagatgt gaaacgtgag aaaaacatca atgatgaaat caagcttctg acttgcaaca
1080
gtgagtatac caagagctac aggcttggaa gatgaataaa gttgggagca ttctgttttt
1140
tcatgagtgc ccatgggaca gacagggaga aatggacagt tgaaagtaca agtctagaca
1200
ggcacagtgg ctcatgtctg taaccctagc actttgggag gctgagatag gagaattact
1260
agggttcagg agtttgagac gaacctgggt gacatagtga gagctcatct ctacaaaaaa
1320
taaaattagc tggcatggt gctgcaagat tatagtcctc cagcctctga gtagctggga
1380

ttacagatgc tcaccacccat gcctaggttaa tttttgtatt ttttagtagag atgggggtttc
 1440
 accatattgg ccaggcaggc cttgaactcc tgacctccag agatctgccc acttcagcct
 1500
 cccaaagtgc tgggattaca ggcgtattcc actgtgcccc gcctgagttt ctgttttagaa
 1560
 acaacagtct atgatagtat aatcctctct tttttgtaca cagagtaaag aggacaaata
 1620
 ggtgaaagaa taaatgaaag gctggaatcc cacttcccc gctgtcccag ggcattggat
 1680
 attgacggat aggaggcagc aaaccactca cagagccagg aagaaatgaa tgcgttggtta
 1740
 ttgccaggag gggaagccgg cccggctgaa atatgctatg accatagcca ggagatactg
 1800
 atggagagaa aggaacacag agaggagag gtcacatctt ggaagaggaa gattgtggag
 1860
 aggggggaatg aggggtctggg gaggggctgc ccatcagaga agggacctca gtgttgggt
 1920
 gactactcat ttggaaattg cgggatggag ggggtattga aggtcggatg caaatccgag
 1980
 aagccagagg aagggttttg ggtgatgctc ccaggatggt gggctctgat gggatctttg
 2040
 gaggggggtgt gtctaggtcg gctgggtgta ggagggtctt ttgtgtgcca ggcagagaaac
 2100
 tgtcccgaag agctgagagt agaggggcca ggagcttcag ggctgcggcc agactgtggc
 2160
 ccagagctca gatcccaaag gacctatagg agaggcaggg gccactcatt cactctgcaa
 2220
 gagaccagca gaatcctgag ggagatgctg acaaatcata aaaagaccaa gaatagccgg
 2280
 gagtggcggc tcaagcctgt gatcccagta ctttttgaga ggtggagaca ggaggatcat
 2340
 gtgagcccag cggttcgaga acaacctggg caacatggtg agacctgtt tctacaaaca
 2400
 tttcaaaaat tagttgggca tgggtgcatg tgcctagtc cagctcctca ggaggetgag
 2460
 gaaagaagat tgcttgagcc caggaattag aggctgcaat gagctatgat catgccactg
 2520
 cactccatcc tgggtggctt gagaccctgt tgtagattc tagtcttgtc cattgttttt
 2580
 gagcttttta
 2590

<210> 5942

<211> 89

<212> PRT

<213> Homo sapiens

<400> 5942

Met Ser Ser Leu His Gly Ser His Gln Gln Phe Phe Phe Pro Leu Leu
 1 5 10 15
 Arg Gln Ser Leu Ala Leu Leu Xaa Gln Val Gly Val Gln Trp His Asp
 20 25 30
 Pro Gly Ser Leu Gln Pro Pro Pro Pro Gly Phe Lys Gln Phe Ser Cys

```

      35          40          45
Leu Ser Leu Pro Ser Ser Trp Asp Tyr Arg Cys Leu Ser Ser Arg Leu
  50          55          60
Ala Thr Phe Cys Ile Phe Ser Arg Asp Arg Val Ser Pro Cys Trp Pro
  65          70          75          80
Gly Trp Ser Gln Thr Pro Asp Leu Lys
      85

```

<210> 5943
 <211> 781
 <212> DNA
 <213> Homo sapiens

```

<400> 5943
nacgcgttgg cagcggcagg agtaaccaga gggagcatat acgccagttg ggttaaagac
  60
tgcttggttga gaattgttgg aaatgatctc gactcggcgc aaactaaacc aactctggat
  120
ggacaacttg ttgtaattgg taaggatgaa tcttatagca agacttctgg gggttccagc
  180
atcaccaagc ttcaaagaca accatttggg gttgagacca agcctggaat cctttgctgt
  240
tttcaaaacg agtttgagaa cccttgcttt ccaaagtctc atttttctgt caccaagct
  300
ggagagcaat ggcgcgatct cagctcacca caacctcgc ctcccagggt caagcaattc
  360
tctgtctca gctcccgag tagctgggac cacaggcacc cgccaccacg cccggctaac
  420
ttttgtattt ttagtagaga cgaggtttca ccgcggtctc gatctcctga cctcatgna
  480
tccgcccacc tcggcctccc aaagtgttgg gattacaggc gtgagccact ggcgccagcc
  540
cagatcagcc ttttatntag caagtcacca tcacaagaca tacaggctaa ggcttaaaag
  600
aagcccttgg gtttaaaaca aatgtttagg aggagatgag aagtttctca tctttgatgg
  660
ctacaaaaat catcaaaaca aattcagggt cagagtctag aaaagatgtt actatttgca
  720
gcatgggtct gatacagcag ttcttaacgg gtaaactgct ttgttttaat ttatattaca
  780
g
  781

```

<210> 5944
 <211> 174
 <212> PRT
 <213> Homo sapiens

```

<400> 5944
Ile Val Gly Asn Asp Leu Asp Ser Ala Gln Thr Lys Pro Thr Leu Asp
  1          5          10          15
Gly Gln Leu Val Val Ile Gly Lys Asp Glu Ser Tyr Ser Lys Thr Ser
  20          25          30
Gly Val Ser Ser Ile Thr Lys Leu Gln Arg Gln Pro Phe Gly Val Glu

```

```

      35              40              45
Thr Lys Pro Gly Ile Leu Cys Cys Phe Gln Asn Glu Phe Glu Asn Pro
      50              55              60
Cys Phe Pro Lys Ser His Phe Ser Val Thr Gln Ala Gly Glu Gln Trp
65              70              75              80
Arg Asp Leu Ser Ser Pro Gln Pro Pro Pro Arg Phe Lys Gln Phe
      85              90              95
Ser Cys Leu Ser Leu Pro Ser Ser Trp Asp His Arg His Pro Pro Pro
      100             105             110
Arg Pro Ala Asn Phe Cys Ile Phe Ser Arg Asp Glu Val Ser Pro Arg
      115             120             125
Ser Arg Ser Pro Asp Leu Met Xaa Ser Ala His Leu Gly Leu Pro Lys
      130             135             140
Cys Trp Asp Tyr Arg Arg Glu Pro Leu Arg Pro Ala Gln Ile Ser Leu
145             150             155             160
Leu Phe Ser Lys Ser Pro Ser Gln Asp Ile Gln Ala Lys Ala
      165             170

```

<210> 5945

<211> 869

<212> DNA

<213> Homo sapiens

<400> 5945

```

nnttcggcct gagagcgggc cgaggagatt ggcgacgggt tccggtgttt tcgttggcgg
60
gtgcctgggc tgggtgggaac accgcccga gaagcaccat gatttcggcc gcgcagttgt
120
tggatgagtt aatgggccgg gaccgaaacc tagccccgga cgagaagcgc agcaacgtgc
180
ggtgggacca cgagagcggt tgtaaatatt atctctgtgg tttttgtcct gcggaattgt
240
tcacaaatac acgttctgat cttgatgtat ttggaagagg agataacatt agagatgtca
300
gcaaattttt ggaagatgac aagtggatgg aggagtagca gcaaacgcaa cagagcagag
360
caacctgtac cctaaaagcc tgcagaagg gatactaaac agaagcgagt gtttgatcag
420
cagaaccttg gacaggctca ggatttggag gcaccaggca gaagaaaaga ggattcttct
480
ctagagaaag tgaacagttc ctgagaagt atctctgcag gtccgtgtga aaaaattcat
540
gatgaaaatc tacgaaaaca gtatgagaag agctctcggt tcatgaaagt tggctatgag
600
agagattttt tgcgatactt acagagctta cttgcagaag tagaacgtag gatcagacga
660
ggccatgctc gtttggcatt atctcaaaac cagcagtctt ctggggccgc tggccaaca
720
ggcaaaaatg gagaaaaat tcaggttcta acagacaaaa ttgatgtact tctgcaacag
780
attgaagaat taggtctga aggaaaagta gaagaagccc aggggatgat gaaattagtt
840
gagcaattaa aagaagagag agaactgct
869

```


<210> 5946
 <211> 121
 <212> PRT
 <213> Homo sapiens

<400> 5946
 Glu Val Ile Ser Ala Gly Pro Cys Glu Lys Ile His Asp Glu Asn Leu
 1 5 10 15
 Arg Lys Gln Tyr Glu Lys Ser Ser Arg Phe Met Lys Val Gly Tyr Glu
 20 25 30
 Arg Asp Phe Leu Arg Tyr Leu Gln Ser Leu Leu Ala Glu Val Glu Arg
 35 40 45
 Arg Ile Arg Arg Gly His Ala Arg Leu Ala Leu Ser Gln Asn Gln Gln
 50 55 60
 Ser Ser Gly Ala Ala Gly Pro Thr Gly Lys Asn Gly Glu Lys Ile Gln
 65 70 75 80
 Val Leu Thr Asp Lys Ile Asp Val Leu Leu Gln Gln Ile Glu Glu Leu
 85 90 95
 Gly Ser Glu Gly Lys Val Glu Glu Ala Gln Gly Met Met Lys Leu Val
 100 105 110
 Glu Gln Leu Lys Glu Glu Arg Glu Leu
 115 120

<210> 5947
 <211> 2283
 <212> DNA
 <213> Homo sapiens

<400> 5947
 gacaagtgga ggcgcgcgtc tagcgcggga ctctgaacta tggcggctag tgatacagag
 60
 cgagatggac tagccccaga aaagacatca ccagatagag ataagaaaaa agagcagtca
 120
 gaagtatctg tttctcctag agcttcaaaa catcattatt caagatcacg atcaagggtca
 180
 agagaaagaa aacgaaagtc agataatgaa ggaagaaaac acaggagccg gagcagaagc
 240
 aaagagcgtg cttatgcgcg aagagactga actgaagacg ctgcagactc agatagcaaa
 300
 ataataagcc tacttcatga tnnaagaacc aacttcttct taaaacaggg aagaagacat
 360
 gaatccaaag ataaatcctc taagaaacat aagtctgagg aacataatga caaagaacat
 420
 tcttctgata aaggaagaga ggcactaaat tcacttgaaa atggtgagga caggcacaaa
 480
 cgcaaagaaa gaaagtcac aagaggcaga agtcactcaa gatctagggtc tcgtgaaaga
 540
 cgccatcgta gtagaagcag ggagcggaag aagtctcgat ccaggagtag ggagcggaag
 600
 aaatcgagat ccagaagcag agagaggaag aaatcgagat ccagaagcag ggaaagaaaa
 660
 cggcggatca ggtctcgttc ccgtcaaga tcaagacaca ggcataggac tagaagcagg
 720

agtaggacaa ggagtaggag tcgagataga aagaagagaa ttgaaaagcc gagaagattt
780
agcagaagtt taagccggac tccaagtcca cctcccttca gaggcagaaa cacagcaatg
840
gatgcacagg aagcttttagc tagaaggttg gaaagggcaa agaaattaca agaacagcga
900
gaaaaggaaa tggttgaaaa acaaaaacaa caagaaatag ctgcagcagc tgcagctact
960
ggaggttctg ttctcaatgt tgctgccctg ttggcatcag gaacacaagt aacacctcag
1020
atagccatgg cagctcagat ggcagccctg caagctaaag ctttggcaga gacaggaata
1080
gctgttccta gctactataa cccagccgct gttaatccaa tgaaatttgc tgaacaagag
1140
aaaaaaagga aatgctttg gcagggcaag aaagaagggg acaaatccca atctgctgaa
1200
atatgggaaa aattgaattt tggaaacaag gacccaaatg tcaaatntag gaaattgatg
1260
ggtattaaga gtgaagatga agctggatgt agctcagttg atgaagaaag ttacaagact
1320
ctgaagcagc aggaagaagt atttcgaaat ttagatgctc agtatgaaat ggcaagatca
1380
caaaccaca cacaagagg aatgggtttg ggtttcacat cttcaatgcg aggaatggat
1440
gcagtttgaa aatgatcaca cttgtaaagt ttgggactta tagacttctt gttctgatgt
1500
cacgtccttg ttcaccaaac agctagcact ctagcttgca tgggtgttgc attgacttta
1560
atttattgaa aaatacaaat tttgtaaat atcagatcag tgatactggg gttagtgttg
1620
taatcagggt aaaccactt ccattaaact tgacaggact atagaaggat aatatttttt
1680
agttcatgaa ttctactttt caaatatata aaagctgcag gtggggataa aatctcatac
1740
atggattttt tegtgtccgc tgtcttgtgt acttttgtac ttaaccttgt acagttattt
1800
tcattctctg aaacatgaaa gaaatgttat gtagatgttc tttagaagat ctggccattt
1860
ggtacataat ccagcacaga taagctgggt ggtaatgata ataaaaatgg ttttctcaaa
1920
actggtgtta atttaagtta cctgggatgt ttctttgaat ttgttttata gtttctgtag
1980
catttggcaa ttgctgttag aaaacactag ctagaaatcc cctccccacc acccttttta
2040
aggccagtta actatactac agtcaatacc gtggtgagca aaaatgtaaa aggtggaagg
2100
agaaaaactta ctaaaatagt atgttttctt attataaggg acagacttgg tattcagtat
2160
ttgtcaaata ttacatgtgt tattcaggag atagattaat gcattaaagg gatgtaagca
2220
cttttatttt aataaagtgc cttataacaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2280
aaa
2283

<210> 5948
 <211> 76
 <212> PRT
 <213> Homo sapiens

<400> 5948
 Met Ala Ala Ser Asp Thr Glu Arg Asp Gly Leu Ala Pro Glu Lys Thr
 1 5 10 15
 Ser Pro Asp Arg Asp Lys Lys Lys Glu Gln Ser Glu Val Ser Val Ser
 20 25 30
 Pro Arg Ala Ser Lys His His Tyr Ser Arg Ser Arg Ser Arg Ser Arg
 35 40 45
 Glu Arg Lys Arg Lys Ser Asp Asn Glu Gly Arg Lys His Arg Ser Arg
 50 55 60
 Ser Arg Ser Lys Glu Arg Ala Tyr Ala Arg Arg Asp
 65 70 75

<210> 5949
 <211> 4706
 <212> DNA
 <213> Homo sapiens

<400> 5949
 nggcggtagt gcgtcggctg ctgcccgggt ctggcagaac tcgggtgttt tgggctgaga
 60
 cagtggcagc tcgcccctcg accccaagtg cggggacctc cggcgaataa aggtcggcct
 120
 gcgggttagc cggtagggcc tcgggtcccg cctgcgggag aactgggtcg tcagtcctcc
 180
 gagtgggtgg gctggggact ttgaggaggt tggctctagg gcacagtccc tgctggcca
 240
 ggtcggagga acaagtgtg ggatctggcg tgtgtgctcc aggggtcttt tcccgggccc
 300
 ttccacctc ttttacttt ggggacggtg ggcctttata aacggactaa tgctgggtga
 360
 tttgttctcg tggttgttga tgccaggaa agactctggg ccccaggact cacctaaact
 420
 ggagttcgaa tactgttcgc tcgtgtgtg accttgaaa aaataacaag cttttctgaa
 480
 gtgagaagct gttctcagcc acgagtcctg tgcaagatca ctaatgatta cctggcattt
 540
 ctgcgacaca ggcaggctct cagggtttgt gcaagtttgc aaacatgttc accctgtctc
 600
 agacctcgag agcatggttc atcgatagag cccgtcaggc acgagaagaa aggcttgtgc
 660
 agaaggaacg ggagcgggca gctgttgtga tccaggccca tgtccggagt tttctctgtc
 720
 ggagtcgact gcagagagat atcaggagag agattgatga cttttttaaa gcagatgacc
 780
 ctgagtcac taaaagaagt gcactttgta ttttcaagat tgccaggaaa ctgctgttcc
 840
 tattcagaat caaagaggat aatgagagat ttgagaagtt gtgtcgcagc atcctgagca
 900

gcattggatgc tgagaatgag cctaagggtg ggtatgtgtc cctggcttgt tctaaggacc
960
tcacctcct ttggattcaa cagatcaaga acattttgtg gtactgctgt gattttctca
1020
agcagctcaa gcctgaaatc ctgcaggact cccgactcat caccctgtac ctcaegatgc
1080
ttgtcacctt cacagacact tcaacgtgga aaattcttcg gggaaaagggt gaaagtcttc
1140
gaccagcgat gaaccacatt tgtgcaaata taatgggaca tctcaaccag catggatttt
1200
attctgtgct gcagatattg ttaaccctgt gcctggcaag acccctcct tgtctatcca
1260
aaggcacttt aacagcagct tttctcttag cgttacgccc tgtgattgct gcacagttct
1320
cagacaatct gattcggcgc ttctcatcc acatcatgtc tgtgctgct ctggtgactc
1380
atctcagcac agtgaccctc gagcgctca ctgttttaga atcccatgac atgcttcgta
1440
aattcatcat atttttaaga gaccaagatc gatgccgtga tgtatgtgaa agtttagaag
1500
gatgccatac gctttgtcta atgggcaacc tcctacactt gggctccctc agccccagag
1560
tgtagagga ggagacagat ggggtcgtga gtttgcctac ccagacgctg tgctactgtc
1620
ggaagtatgt gtctcagaag aagtccaacc tgaccactg gcacccctgtc cttggctggt
1680
tctcccaatc tgtggattat ggccttaacg agtcaatgca cttgatcacc aaacagctgc
1740
agttcttgtg gggggtgcct ctgatccgga tcttcttctg tgacatcctg agcaagaagc
1800
tactggagag ccaggagcca gcccacgcac agccagcatc cctcagaat gtgctccag
1860
tgaagagtct cctaaagcgt gcttttcaaa agtcggcatc agtcgggaat attctcaggc
1920
ctgtcggggg taaacgggtc gactctgcag aagtcagaa ggtttgcaac atctgtgtcc
1980
tctaccagac ctgctgaca actctcacac agattcggct gcagatactc acaggtctca
2040
cttaccttga tgacctgtt cccaaactgt gggcatttat ctgtgagctc gggccccacg
2100
gagggttaaa gctcttcttg gaatgcctga acaatgacac tgaagagtcc aagcaactct
2160
tggccatgct gatgctgttc tgtgactgtt cgcggcacct catcacaatc cttgatgaca
2220
ttgaagtta tgaagaacag atttcattca aactggaaga gctggctact atctctctt
2280
tcctgaatc ttttgtgtt aagatgatct gggatggaat tgtagagaac gccaaggggtg
2340
agaccttga gctgttcag tctgtccacg ggtggcttat ggtgctgtac gagcgggact
2400
gccggcgcg cttcaccccc gaggaccact ggtgcgaaa ggatctcaaa cctagcgtgc
2460
tcttcaaga actcgacagg gacagaaaac gggcacagtt gatcctgcag tacatccac
2520

atgtcatccc tcacaaaaac agagttctac tgtttcgaac catgggttacc aaggagaagg
2580
agaaactggg gctgggtgaa accagctctg cctccccgca tgtcactcac atcaccatcc
2640
gccggtccag gatgctggag agcttgtttg agtgcccctg gccactggtg atcaatgccg
2700
agagctgcta ggaaggcagt gtgtgctgaa cagtggatgt ttctgacatt cttcaaggac
2760
ggctacgagc agcttaggca gctctcccag cacgccatga aggggggtcat ccgtgtgaag
2820
tttgtcaatg acctcggggg ggacgaagca gggattgac aagacgggtg ttttaaggag
2880
ttcttgggaag agatcatcaa gagagttttt gaccacgac tcaatctgtt caagacaacc
2940
agtggggatg agaggctgta cccctcacc acatcctaca tccatgagaa ttacctgcag
3000
ctcttcgagt ttgtggggaa gatgctgggg aaggctgtgt atgagggaa tgtgggtggac
3060
gtgccatttg catccttctt cctgagccaa ctgcttgggc accaccacag cgtcttctat
3120
agctcgggtg atgaactgcc ttctctggac tccgagttct ataaaaacct cacctccatc
3180
aagcgctatg atggggacat cactgacctg ggccctgacgc tgtcttacga cgaggacgtc
3240
atgggtcagc ttgtttgcca tgaactgatt cctggaggga agaccattcc tgttacaaat
3300
gaaaataaaa ttagctacat ccactgatg gcacatttcc gaatgcacac tcaaataaaa
3360
aaccaaacag ctgccctcat tagcggattc cgttccatta tcaaaccoga gtggatccga
3420
atgtttctca ctcctgaact gcagcgtctc atctctggcg acaatgctga gattgatctg
3480
gaagatttaa agaagcacac agtctactac ggtgggtttcc atggaagtca cagagtcac
3540
atctggctct gggatattct ggccctccgac ttcacaccgg atgagagagc tatgtttctg
3600
aagtctgta ccagctgctc cagacccccg ctctctggat tcgcctacct caagcctcca
3660
ttctccatcc gctgcgtgga ggtgtcggac gatcaggaca ccggggacac tctgggcagc
3720
gtcctccggg gcttcttcac catccgcaag cgggagccag gcggccgcct gcccacctcc
3780
tccacctgct tcaacctgct caagctgccc aactacagca agaagagcgt cctccgcgag
3840
aagctgcgct acgccatcag catgaacacg ggctttgaac tctcctagct cctgtcccag
3900
ccctgcctcc agggctcctg ggctgccagg gaccttcagc tcccagaggc agtgtggtcc
3960
tgggaatgtg accaacadgc cagggtgacat tggcccctag accctctcta tagccatgag
4020
actccttggt gcctcaagaa atttagacgc ccacgacagc actacacagc atctccaggt
4080
gatgccaag gcacagggct gcagaaaata aacctccaga ttccaccaac acgggtccat
4140

tcttcctggt gatggcagag gggcttcttt tagctagttt gatcttttgg gagtctgtct
 4200
 ttccttagcc gtctgagtga gctgtgtatg aacaagtccc aggagttcca agagtctaga
 4260
 gtgggtttttg cagcatgggt tgagtgtaca aagcctactg tgcgtgagat cctctccttc
 4320
 cgtttctgaa atctcttact caggtaaggc ctgcgcaagc ctctatgcac cccacaaagt
 4380
 ttctgcctcc atgccgtcca cagcgcctct tcccagacag ccaggcccat ctgctgccca
 4440
 gggaagcgca ggcgcctgct agggacgcta tggacaccgt gagtccaagg cgctgctcct
 4500
 gccttgaagc cagcgcctcc acgccgcggc cctcccattt tctgcgtcct cagcgggctg
 4560
 agctgccaga gagtcttccc ggacctattc ccgtcctatg cattcacatt ggcactctgg
 4620
 tttgggggaa gaaaaacaac ggccttagc agcagcccg tttccagaat gtgctgcctg
 4680
 ttccccaag cctgcttgtc ccgcgg
 4706

<210> 5950

<211> 397

<212> PRT

<213> Homo sapiens

<400> 5950

Met	Pro	Arg	Ala	Ala	Arg	Lys	Ala	Val	Cys	Ala	Glu	Gln	Trp	Met	Phe
1			5					10						15	
Leu	Thr	Phe	Phe	Lys	Asp	Gly	Tyr	Glu	Gln	Leu	Arg	Gln	Leu	Ser	Gln
		20					25					30			
His	Ala	Met	Lys	Gly	Val	Ile	Arg	Val	Lys	Phe	Val	Asn	Asp	Leu	Gly
		35				40					45				
Val	Asp	Glu	Ala	Gly	Ile	Asp	Gln	Asp	Gly	Val	Phe	Lys	Glu	Phe	Leu
	50				55					60					
Glu	Glu	Ile	Ile	Lys	Arg	Val	Phe	Asp	Pro	Ala	Leu	Asn	Leu	Phe	Lys
65				70				75						80	
Thr	Thr	Ser	Gly	Asp	Glu	Arg	Leu	Tyr	Pro	Ser	Pro	Thr	Ser	Tyr	Ile
			85				90						95		
His	Glu	Asn	Tyr	Leu	Gln	Leu	Phe	Glu	Val	Gly	Lys	Met	Leu	Gly	
		100					105					110			
Lys	Ala	Val	Tyr	Glu	Gly	Ile	Val	Val	Asp	Val	Pro	Phe	Ala	Ser	Phe
		115				120					125				
Phe	Leu	Ser	Gln	Leu	Leu	Gly	His	His	His	Ser	Val	Phe	Tyr	Ser	Ser
	130				135					140					
Val	Asp	Glu	Leu	Pro	Ser	Leu	Asp	Ser	Glu	Phe	Tyr	Lys	Asn	Leu	Thr
145				150					155					160	
Ser	Ile	Lys	Arg	Tyr	Asp	Gly	Asp	Ile	Thr	Asp	Leu	Gly	Leu	Thr	Leu
		165					170						175		
Ser	Tyr	Asp	Glu	Asp	Val	Met	Gly	Gln	Leu	Val	Cys	His	Glu	Leu	Ile
		180					185						190		
Pro	Gly	Gly	Lys	Thr	Ile	Pro	Val	Thr	Asn	Glu	Asn	Lys	Ile	Ser	Tyr
	195					200					205				
Ile	His	Leu	Met	Ala	His	Phe	Arg	Met	His	Thr	Gln	Ile	Lys	Asn	Gln

```

      210              215              220
Thr Ala Ala Leu Ile Ser Gly Phe Arg Ser Ile Ile Lys Pro Glu Trp
225              230              235              240
Ile Arg Met Phe Ser Thr Pro Glu Leu Gln Arg Leu Ile Ser Gly Asp
      245              250              255
Asn Ala Glu Ile Asp Leu Glu Asp Leu Lys Lys His Thr Val Tyr Tyr
      260              265              270
Gly Gly Phe His Gly Ser His Arg Val Ile Ile Trp Leu Trp Asp Ile
      275              280              285
Leu Ala Ser Asp Phe Thr Pro Asp Glu Arg Ala Met Phe Leu Lys Phe
      290              295              300
Val Thr Ser Cys Ser Arg Pro Pro Leu Leu Gly Phe Ala Tyr Leu Lys
305              310              315              320
Pro Pro Phe Ser Ile Arg Cys Val Glu Val Ser Asp Asp Gln Asp Thr
      325              330              335
Gly Asp Thr Leu Gly Ser Val Leu Arg Gly Phe Phe Thr Ile Arg Lys
      340              345              350
Arg Glu Pro Gly Gly Arg Leu Pro Thr Ser Ser Thr Cys Phe Asn Leu
      355              360              365
Leu Lys Leu Pro Asn Tyr Ser Lys Lys Ser Val Leu Arg Glu Lys Leu
      370              375              380
Arg Tyr Ala Ile Ser Met Asn Thr Gly Phe Glu Leu Ser
385              390              395

```

<210> 5951
 <211> 1724
 <212> DNA
 <213> Homo sapiens

<400> 5951
 ngaaatcttg tataccgccc gcgagaagaa gccgatcgag cctttgtctg gaaagtcagc
 60
 atctccggct ccgggtgcaa tgtgttcctg gtgacattag catcgggcag acccgccagg
 120
 agaggagggg tcgccagggt cccgtctgct ttcggaggcg gatcgagcgg gtgacttttg
 180
 tgcattcgtt ttaatttttg gaaatctctc ttttttcctc cctcgctcgc tgcggggcat
 240
 gtctgatct ggcgccgct cctaccaccc tgggcagccg agcagagtgg tccccagcgg
 300
 tctccctccc tgcctccctg actttgcaac accgcgttcc gggaggaccg gcctcggcga
 360
 gggaggaggg gggggagctg cgaacaccca gacccaaacc ctgacatgct ctggggcgga
 420
 gaggaggaag ccaggagctg agcgcgccgc gtgggctgct tcgccctccg gctccgagcg
 480
 ccgggctccg ggcgccctgc cctgcgctg ggcagcagcc ttgctggtct tgggggcgcc
 540
 ccccgcttcc cgcccggggg gttcgcggcc ggcaggacca tgctgctgaa agagtaccgg
 600
 atctgcatgc cgctcacctg agacgagtac aaaattggac agctgtacat gatcagcaaa
 660
 cacagccatg aacagagtga ccggggagaa ggggtggagg tcgtccagaa tgagcccttt
 720

gaggaccctc accatggcaa tgggcagttc accgagaagc ggggtgatct caacagcaaa
 780
 ctgcctagtt gggctagagc tgttgctccc aaaatatatt atgtgacaga gaaggcttgg
 840
 aactattatc cctacacaat tacagaatac acatgttcct ttctgccgaa attctccatt
 900
 catatagaaa ccaagtatga ggacaacaaa ggaagcaatg acaccatttt cgacaatgaa
 960
 gccaaagacg tggagagaga agtttgcttt attgatattg cctgcgatga aattccagag
 1020
 cgctactaca aagaatctga ggatcctaag cacttcaagt cagagaagac aggacgggga
 1080
 cagttgaggg aaggctggag agatagtcac cagcctatca tgtgtcctca caagctgggtg
 1140
 actgtgaagt ttgaggtctg ggggcttcag accagagtgg aacaatttgt acacaagggtg
 1200
 gtccgagaca ttctgctgat tggacataga caggcttttg catggggtga tgagtgggtat
 1260
 gacatgacaa tggatgaagt ccgagaattt gaacgagcca ctcaggaagc caccaacaag
 1320
 aaaatcggca ttttcccacc tgcaatttct atctccagca tccccctgct gccttcttcc
 1380
 gtccgcagtg cgccttctag tgtctcatcc acccctctct ccacagacgc acccgaattt
 1440
 ctgtccgttc ccaaagatcg gccccggaaa aagtctgccc cagaaactct cacacttcca
 1500
 gacctgaga aaaaagccac cctgaattta cccggcatgc actcttcaga taagccatgt
 1560
 cggcccaaat ctgagtaact ttatataaat atctcatggg gttttatatt ttcatttgtt
 1620
 gttgttgttt ttttttaaga atcttctgat agagaaaaag actgctttgt cactcaaaca
 1680
 tgttctctcg accttaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 1724

<210> 5952

<211> 378

<212> PRT

<213> Homo sapiens

<400> 5952

Ala Arg Arg Val Gly Cys Phe Ala Leu Arg Leu Arg Ala Pro Gly Ser
 1 5 10 15
 Gly Arg Pro Ala Leu Arg Leu Gly Ser Ser Leu Ala Gly Leu Gly Gly
 20 25 30
 Ala Pro Arg Phe Pro Pro Gly Gly Phe Ala Ala Gly Arg Thr Met Leu
 35 40 45
 Leu Lys Glu Tyr Arg Ile Cys Met Pro Leu Thr Val Asp Glu Tyr Lys
 50 55 60
 Ile Gly Gln Leu Tyr Met Ile Ser Lys His Ser His Glu Gln Ser Asp
 65 70 75 80
 Arg Gly Glu Gly Val Glu Val Val Gln Asn Glu Pro Phe Glu Asp Pro
 85 90 95
 His His Gly Asn Gly Gln Phe Thr Glu Lys Arg Val Tyr Leu Asn Ser

	100		105		110										
Lys	Leu	Pro	Ser	Trp	Ala	Arg	Ala	Val	Val	Pro	Lys	Ile	Phe	Tyr	Val
	115						120					125			
Thr	Glu	Lys	Ala	Trp	Asn	Tyr	Tyr	Pro	Tyr	Thr	Ile	Thr	Glu	Tyr	Thr
	130					135					140				
Cys	Ser	Phe	Leu	Pro	Lys	Phe	Ser	Ile	His	Ile	Glu	Thr	Lys	Tyr	Glu
145					150					155					160
Asp	Asn	Lys	Gly	Ser	Asn	Asp	Thr	Ile	Phe	Asp	Asn	Glu	Ala	Lys	Asp
			165						170					175	
Val	Glu	Arg	Glu	Val	Cys	Phe	Ile	Asp	Ile	Ala	Cys	Asp	Glu	Ile	Pro
			180					185					190		
Glu	Arg	Tyr	Tyr	Lys	Glu	Ser	Glu	Asp	Pro	Lys	His	Phe	Lys	Ser	Glu
	195						200					205			
Lys	Thr	Gly	Arg	Gly	Gln	Leu	Arg	Glu	Gly	Trp	Arg	Asp	Ser	His	Gln
	210					215					220				
Pro	Ile	Met	Cys	Ser	Tyr	Lys	Leu	Val	Thr	Val	Lys	Phe	Glu	Val	Trp
225					230					235					240
Gly	Leu	Gln	Thr	Arg	Val	Glu	Gln	Phe	Val	His	Lys	Val	Val	Arg	Asp
			245					250						255	
Ile	Leu	Leu	Ile	Gly	His	Arg	Gln	Ala	Phe	Ala	Trp	Val	Asp	Glu	Trp
			260				265						270		
Tyr	Asp	Met	Thr	Met	Asp	Glu	Val	Arg	Glu	Phe	Glu	Arg	Ala	Thr	Gln
	275					280				285					
Glu	Ala	Thr	Asn	Lys	Lys	Ile	Gly	Ile	Phe	Pro	Pro	Ala	Ile	Ser	Ile
	290					295				300					
Ser	Ser	Ile	Pro	Leu	Leu	Pro	Ser	Ser	Val	Arg	Ser	Ala	Pro	Ser	Ser
305				310					315						320
Ala	Pro	Ser	Thr	Pro	Leu	Ser	Thr	Asp	Ala	Pro	Glu	Phe	Leu	Ser	Val
			325					330					335		
Pro	Lys	Asp	Arg	Pro	Arg	Lys	Lys	Ser	Ala	Pro	Glu	Thr	Leu	Thr	Leu
			340				345					350			
Pro	Asp	Pro	Glu	Lys	Lys	Ala	Thr	Leu	Asn	Leu	Pro	Gly	Met	His	Ser
	355					360					365				
Ser	Asp	Lys	Pro	Cys	Arg	Pro	Lys	Ser	Glu						
	370					375									

<210> 5953

<211> 777

<212> DNA

<213> Homo sapiens

<400> 5953

```

tttcggcacg aggcccgag tcgtaagagg tctccgcgcc gctccctgta caaactggtg
60
ggctcgccgc cttggaaga ggctttccgg cagagatgcc tggagagaat gagaaacagc
120
cgggacaggc tcctaaacag gtaccgccag ctgngaagca gtgggccagg gaattctcag
180
aacagctttc tagttcaaga ggtgatggaa gaagagtgga atgctttgca gtcagtggag
240
aattgtccag aagactggc tcagctggag gagctgatag acatggctgt gctggaggaa
300
attcaacagg agctgatcaa ccaagagcag tccatcatca gcgagtatga gaagagcttg
360

```

cagtttgatg aaaagtgtct cagcatcatg ctggctgagt gggaggcaaa cccactcatc
 420
 tgtcctgtat gtacaaagcc tgtgatactt gggctgtgat cctctagagc cagcttgagc
 480
 tcacatcatt ctatgggggtt gaagacaact cattccctct gaggagcctt gtacatacaa
 540
 gccttttatt tataacttat tttgtattga aactttttaa caatactgaa gaaaaaaaaa
 600
 cttttccgac atctgttctt ggtcttttgt gacgcaggtt gaagggggag gaatagaaaa
 660
 agacaaactg ccttgaggga gataaaccaa ttttatgtct atcatgttat acaaaaatct
 720
 agaaataata gatttgtaca gaaaaaatg ataataaatg agaacacaaa acatata
 777

<210> 5954

<211> 152

<212> PRT

<213> Homo sapiens

<400> 5954

Phe Arg His Glu Ala Arg Ser Arg Lys Arg Ser Pro Arg Arg Ser Leu
 1 5 10 15
 Tyr Lys Leu Val Gly Ser Pro Pro Trp Lys Glu Ala Phe Arg Gln Arg
 20 25 30
 Cys Leu Glu Arg Met Arg Asn Ser Arg Asp Arg Leu Leu Asn Arg Tyr
 35 40 45
 Arg Gln Leu Xaa Ser Ser Gly Pro Gly Asn Ser Gln Asn Ser Phe Leu
 50 55 60
 Val Gln Glu Val Met Glu Glu Trp Asn Ala Leu Gln Ser Val Glu
 65 70 75 80
 Asn Cys Pro Glu Asp Leu Ala Gln Leu Glu Glu Leu Ile Asp Met Ala
 85 90 95
 Val Leu Glu Glu Ile Gln Gln Glu Leu Ile Asn Gln Glu Gln Ser Ile
 100 105 110
 Ile Ser Glu Tyr Glu Lys Ser Leu Gln Phe Asp Glu Lys Cys Leu Ser
 115 120 125
 Ile Met Leu Ala Glu Trp Glu Ala Asn Pro Leu Ile Cys Pro Val Cys
 130 135 140
 Thr Lys Pro Val Ile Leu Gly Leu
 145 150

<210> 5955

<211> 1459

<212> DNA

<213> Homo sapiens

<400> 5955

nncaattgga ctgcattatc aaacacatgt gctatgtaca tcctcagtc acctgccagc
 60
 agatatactg gagggtcat gagtgaattt agtccaagat ttaaagccct gccccaggt
 120
 gctcagcctg tgatctgtat ccactcagca tgcacttggg cagatgattt gtctgtgtgc
 180

tacccttccc cccatattac catacatatg cacggcggga ccagcagcga cggtagcagc
 240
 agcatggccg cgatctatgg ggggtgtagag gggggaggca cacgatccga ggtcctttta
 300
 gtctcagagg atgggaagat cctggcagaa gcagatggac tgagcacaaa cactggctg
 360
 atcgggacag acaagtgtgt ggagaggatc aatgagatgg tgaacagggc caaacggaaa
 420
 gcaggggtgg atcctctggt accgctgcga agcttgggcc tatctctgag cggtagggac
 480
 caggaggacg cggggaggat cctgatcgag gagctgagg accgatttcc ctacctgagt
 540
 gaaagctact taatcaccac cgatgccgcc ggctccatcg ccacagctac accggatggt
 600
 ggagttgtgc tcatatctgg aacaggctcc aactgcaggc tcatcaaccc tgatggctcc
 660
 gagagtggct gcggcggctg gggccatag atgggtgatg agggttcagc cctctctgct
 720
 ccctcagcct actggatcgc acaccaagca gtgaaaatag tgtttgactc cattgacaac
 780
 ctagaggcgg ctctctcatga tatcggtac gtcaaacagg ccattgtcca ctatttcag
 840
 gtgccagatc ggctagggat actcactcac ctgtataggg actttgataa atgcaggttt
 900
 gctgggtttt gccggaaaat tgcagaaggt gtcagcagg gagacccct tccccgctat
 960
 atcttcagga aggtcgggga gatgctgggc agacacatcg tagcagtgtt gcccgagatt
 1020
 gacccggtct tggtccaggg caagattgga ctccccatcc tgtgcgtggg ctctgtgtgg
 1080
 aagagctggg agctgctgaa ggaaggtttt cttttggcgc tgaccaggg cagagagatc
 1140
 caggctcaga acttcttctc cagcttcacc ctgatgaagc tgaggcactc ctccgctctg
 1200
 ggtggggcca gcctaggggc caggcacatc gggcacctcc tccccatgga ctatagcgcc
 1260
 aatgccattg ccttctatcc ctacacctt tcttaggggg ctggtcccgg ctccaccccc
 1320
 tccaagctca gtggacactg ggtctgaaag gaaggagtct tttgcttct tctcctttt
 1380
 tacaaaaaca aacatagaag aaaataaatg cactttatcc actcccaaa aaaaaaaaaa
 1440
 aaaaaaaaaa aagtcgacg
 1459

<210> 5956

<211> 431

<212> PRT

<213> Homo sapiens

<400> 5956

Xaa Asn Trp Thr Ala Leu Ser Asn Thr Cys Ala Met Tyr Ile Leu Ser
 1 5 10 15
 Ala Pro Ala Ser Arg Tyr Pro Gly Gly Leu Met Ser Glu Phe Ser Pro

```

      20      25      30
Arg Phe Lys Ala Leu Pro Pro Gly Ala Gln Pro Val Ile Cys Ile His
      35      40      45
Ser Ala Cys Thr Trp Ala Asp Asp Leu Ser Val Cys Tyr Pro Ser Pro
      50      55      60
His Ile Thr Ile His Met His Gly Gly Thr Ser Ser Asp Gly Ser Ser
      65      70      75      80
Ser Met Ala Ala Ile Tyr Gly Gly Val Glu Gly Gly Gly Thr Arg Ser
      85      90      95
Glu Val Leu Leu Val Ser Glu Asp Gly Lys Ile Leu Ala Glu Ala Asp
      100      105      110
Gly Leu Ser Thr Asn His Trp Leu Ile Gly Thr Asp Lys Cys Val Glu
      115      120      125
Arg Ile Asn Glu Met Val Asn Arg Ala Lys Arg Lys Ala Gly Val Asp
      130      135      140
Pro Leu Val Pro Leu Arg Ser Leu Gly Leu Ser Leu Ser Gly Gly Asp
      145      150      155      160
Gln Glu Asp Ala Gly Arg Ile Leu Ile Glu Glu Leu Arg Asp Arg Phe
      165      170      175
Pro Tyr Leu Ser Glu Ser Tyr Leu Ile Thr Thr Asp Ala Ala Gly Ser
      180      185      190
Ile Ala Thr Ala Thr Pro Asp Gly Gly Val Val Leu Ile Ser Gly Thr
      195      200      205
Gly Ser Asn Cys Arg Leu Ile Asn Pro Asp Gly Ser Glu Ser Gly Cys
      210      215      220
Gly Gly Trp Gly His Met Met Gly Asp Glu Gly Ser Ala Leu Ser Ala
      225      230      235      240
Pro Ser Ala Tyr Trp Ile Ala His Gln Ala Val Lys Ile Val Phe Asp
      245      250      255
Ser Ile Asp Asn Leu Glu Ala Ala Pro His Asp Ile Gly Tyr Val Lys
      260      265      270
Gln Ala Met Phe His Tyr Phe Gln Val Pro Asp Arg Leu Gly Ile Leu
      275      280      285
Thr His Leu Tyr Arg Asp Phe Asp Lys Cys Arg Phe Ala Gly Phe Cys
      290      295      300
Arg Lys Ile Ala Glu Gly Ala Gln Gln Gly Asp Pro Leu Ser Arg Tyr
      305      310      315      320
Ile Phe Arg Lys Ala Gly Glu Met Leu Gly Arg His Ile Val Ala Val
      325      330      335
Leu Pro Glu Ile Asp Pro Val Leu Phe Gln Gly Lys Ile Gly Leu Pro
      340      345      350
Ile Leu Cys Val Gly Ser Val Trp Lys Ser Trp Glu Leu Leu Lys Glu
      355      360      365
Gly Phe Leu Leu Ala Leu Thr Gln Gly Arg Glu Ile Gln Ala Gln Asn
      370      375      380
Phe Phe Ser Ser Phe Thr Leu Met Lys Leu Arg His Ser Ser Ala Leu
      385      390      395      400
Gly Gly Ala Ser Leu Gly Ala Arg His Ile Gly His Leu Leu Pro Met
      405      410      415
Asp Tyr Ser Ala Asn Ala Ile Ala Phe Tyr Ser Tyr Thr Phe Ser
      420      425      430

```

<210> 5957

<211> 855

<212> DNA

<213> Homo sapiens

<400> 5957

atggcggagt cgttgaggtc tccgcgccgc tccctgtaca aactgggtggg ctgcgcgcct
60
tggaagagg ctttccggca gagatgcctg gagagaatga gaaacagccg ggacaggctc
120
ctaaacaggt accgccaggc tggaagcagt gggccaggga attctcagaa cagctttcta
180
gttcaagagg tgatggaaga agagtggaat gctttgcagt cagtggagaa ttgtccagaa
240
gacttggtc agctggagga gctgatagac atggctgtgc tggaggaaat tcaacaggag
300
ctgatcaacc aaggcctgtg atacttgggc tgtgacctc tagagccagc ttggactcac
360
atcattctat ggggttgaag acaactcatt ccctctgagg agccttgtag atacaagcct
420
tttatttata acttattttg tattgaaact tttaacaat actgaagaaa aaaaaacttt
480
tccgacatct gttcttggtc ttttgtgaca cagggtgaag ggggaggaat agaaaaagac
540
aaactgcctt ggaggagata aaccaatttt atgtctatca tggtatacaa aaatctagaa
600
ataatagatt tgtacagaaa aaaatgataa taaatgagag cacaaaacat ataatttaaa
660
tctgggtattt tttcccccatt gatattagga tgataatcat ttcaaagcac atgtctagct
720
tcagagtagg atttggtcac tggccaaagc ctgccatgaa actatggctt tcagcatctg
780
tctgctctac tggctcttga caaaactctt gaggtcttca agaaaagtaa tgtactcctg
840
gtgctccagg gctgt
855

<210> 5958

<211> 106

<212> PRT

<213> Homo sapiens

<400> 5958

Met	Ala	Glu	Ser	Leu	Arg	Ser	Pro	Arg	Arg	Ser	Leu	Tyr	Lys	Leu	Val
1				5				10						15	
Gly	Ser	Pro	Pro	Trp	Lys	Glu	Ala	Phe	Arg	Gln	Arg	Cys	Leu	Glu	Arg
		20						25					30		
Met	Arg	Asn	Ser	Arg	Asp	Arg	Leu	Leu	Asn	Arg	Tyr	Arg	Gln	Ala	Gly
		35					40				45				
Ser	Ser	Gly	Pro	Gly	Asn	Ser	Gln	Asn	Ser	Phe	Leu	Val	Gln	Glu	Val
		50				55				60					
Met	Glu	Glu	Glu	Trp	Asn	Ala	Leu	Gln	Ser	Val	Glu	Asn	Cys	Pro	Glu
65					70					75				80	
Asp	Leu	Ala	Gln	Leu	Glu	Glu	Leu	Ile	Asp	Met	Ala	Val	Leu	Glu	Glu
			85					90						95	
Ile	Gln	Gln	Glu	Leu	Ile	Asn	Gln	Gly	Leu						

100

105

<210> 5959

<211> 830

<212> DNA

<213> Homo sapiens

<400> 5959

gatgagaaga ttcagccaat attagacaaa gtaggctctt tggtaaacgc aaggcttgaa
 60
 tttctcggg gccttatgat gctggttctt gagaagttag cactgatat tccttgtctg
 120
 ctatatgatg acaatctctt ctgtcatttg gtggatgaag tactcttgtt tgaaagggag
 180
 ctacacagtg ttcattggcta tcctggcact tttgctaatt gtatgcatat tctatcagag
 240
 gaaacctgtt ttcaaagatg ggtgacgggg gagagaaaat ttgctcttca aaaaatggac
 300
 tcaatgcttt cctcagaagc tgcttgggta tcgcaatata aggatatcac tgacgtggat
 360
 gaaatgaaag ttccagattg tgcagaaact tttatgactc tactcttggg tataactgac
 420
 aggtataaaa atcttccac agcttccga aagcttcagt tcctggagtt acagaaggac
 480
 ttagtagatg attttaggat acgattaaca caagtgatga aagaagagac tagagcttcc
 540
 cttggtttc gatactgtgc aattcttaat gctgtgaact acatctcaac agtactagca
 600
 gattgggctg acaatgtttt ctttctacaa cttcaacagg ctgactgga ggtgtttgca
 660
 gagaataata ctctgagtaa attgcagcta ggacagctag cctctatgga gagctctgtc
 720
 tttgatgaca tgattaacct cttagaacgt ttaaagcatg atatgttgac cgtcaagta
 780
 gaccacgttt ttagagaagt taaagatgct gcaaaattgt ataaaaaaga
 830

<210> 5960

<211> 251

<212> PRT

<213> Homo sapiens

<400> 5960

Met Met Leu Val Leu Glu Lys Leu Ala Thr Asp Ile Pro Cys Leu Leu
 1 5 10 15
 Tyr Asp Asp Asn Leu Phe Cys His Leu Val Asp Glu Val Leu Leu Phe
 20 25 30
 Glu Arg Glu Leu His Ser Val His Gly Tyr Pro Gly Thr Phe Ala Asn
 35 40 45
 Cys Met His Ile Leu Ser Glu Glu Thr Cys Phe Gln Arg Trp Val Thr
 50 55 60
 Gly Glu Arg Lys Phe Ala Leu Gln Lys Met Asp Ser Met Leu Ser Ser
 65 70 75 80
 Glu Ala Ala Trp Val Ser Gln Tyr Lys Asp Ile Thr Asp Val Asp Glu

```

      85              90              95
Met Lys Val Pro Asp Cys Ala Glu Thr Phe Met Thr Leu Leu Leu Val
      100              105              110
Ile Thr Asp Arg Tyr Lys Asn Leu Pro Thr Ala Ser Arg Lys Leu Gln
      115              120              125
Phe Leu Glu Leu Gln Lys Asp Leu Val Asp Asp Phe Arg Ile Arg Leu
      130              135              140
Thr Gln Val Met Lys Glu Glu Thr Arg Ala Ser Leu Gly Phe Arg Tyr
      145              150              155              160
Cys Ala Ile Leu Asn Ala Val Asn Tyr Ile Ser Thr Val Leu Ala Asp
      165              170              175
Trp Ala Asp Asn Val Phe Phe Leu Gln Leu Gln Gln Ala Ala Leu Glu
      180              185              190
Val Phe Ala Glu Asn Asn Thr Leu Ser Lys Leu Gln Leu Gly Gln Leu
      195              200              205
Ala Ser Met Glu Ser Ser Val Phe Asp Asp Met Ile Asn Leu Leu Glu
      210              215              220
Arg Leu Lys His Asp Met Leu Thr Arg Gln Val Asp His Val Phe Arg
      225              230              235              240
Glu Val Lys Asp Ala Ala Lys Leu Tyr Lys Lys
      245              250

```

<210> 5961
 <211> 585
 <212> DNA
 <213> Homo sapiens

<400> 5961
 gctcggggct gcagtgcgct ctaatggtgc ctgtgaataa ccactgcatt cagcctgggc
 60
 aatgaagcga gaccccgctc taaaaaaaa aattgagggg tcaaagagga tgccaaactt
 120
 aattagagac tgagacaggg caggggtgccg aggtgtctgc atgcgtttca tgtggatgcc
 180
 cgtgtctatt ctggcctgct cctggggccc ctccccactc agccctggct gatgagaatg
 240
 ggacagggac tcccttctcg tgtccctgtg cagcgtcggc ccaggaggta gcagagcagt
 300
 atatgcacat ctgggtgtgc cctcctgcat gtccccacac atctgtcatt cctgtctttg
 360
 cacacctatg tgactcccgc atgttttgtgt ccttatgtgt cccatgcatg ctccccatct
 420
 gaccttgctg gttctcgcgt gtctgtgtgc ggccagtcct gccttctact tctcatgggt
 480
 ggccctggca gcatgtctgg ctccccagca ggtgagctca ggagataaga tggaagatgc
 540
 aacagccaat ggtcaagaag actccaaggc ccagatggg tccac
 585

<210> 5962
 <211> 114
 <212> PRT
 <213> Homo sapiens

<400> 5962

```

Met Cys Gly Asp Met Gln Glu Gly Thr Pro Arg Cys Ala Tyr Thr Ala
 1             5             10             15
Leu Leu Pro Pro Gly Pro Thr Leu His Arg Asp Thr Arg Arg Glu Ser
      20             25             30
Leu Ser His Ser His Gln Pro Gly Leu Ser Gly Glu Gly Ala Gln Glu
      35             40             45
Gln Ala Arg Ile Asp Thr Gly Ile His Met Lys Arg Met Gln Thr Pro
      50             55             60
Arg His Pro Ala Leu Ser Gln Ser Leu Ile Lys Phe Gly Ile Leu Phe
65             70             75             80
Asp Pro Ser Ile Phe Phe Leu Glu Thr Gly Ser Arg Phe Ile Ala Gln
      85             90             95
Ala Glu Cys Ser Gly Tyr Ser Gln Ala Pro Leu Glu Arg Thr Ala Ala
      100             105             110
Pro Ser

```

<210> 5963

<211> 1288

<212> DNA

<213> Homo sapiens

<400> 5963

```

atggggctgt ttgaaagac ccaggagaag ccgcccacaa aactgggtcaa tgagtgggtca
60
ttgaagataa gaaaggaaat gagagttggt gacaggcaaa taagggatat ccaaagagaa
120
gaagaaaaag tgaacgcatc tgtgaaagat gctgccaaga agggccagaa ggatgtctgc
180
atagttctgg ccaaggagat gatcagggtca aggaaggctg tgagcaagct gtatgcatcc
240
aaagcacaca tgaactcagt gctcatgggg atgaagaacc agctcgcggt cttgcgagtg
300
gctggttccc tgcagaagag cacagaagtg atgaaggcca tgcaaagtct tgtgaagatt
360
ccagagattc agggccaccat gagggagttg tccaaagaaa tgatgaaggc tgggatcata
420
gaggagatgt tagaggacac ttttgaaagc atggacgac aggaagaaat ggaggaagaa
480
gcagaaatgg aaattgacag aattctcttt gaaattacag caggggcctt gggcaaagca
540
cccagtaaag tgactgatgc ctttcagag ccagaacctc caggagcgat ggctgcctca
600
gaggatgagg agaggagga agaggctctg gaggccatgc agtcccggct ggccacactc
660
cgcagctagg ggctgcctac cccgctgggt gtgcacacac tcctctcaag agctgccatt
720
ttatgtgtct cttgcactac acctctgttg tgaggactac cattttggag aaggtttctgt
780
ttgtctcttt tcattctctg ccagggtttt gggatcgcaa agggattggt cttataaaag
840
tggcataaat aatgcacat ttttaggag tatagacaga tatatcttat tgtggggagg
900

```


ggaagaaaat ccattctgctc atgaagcact tctgaaaata taggtgattg cctgaatgtc
 960
 gaagactcta cttttgtcta taaaacacta tataaatgaa ttttaataaa tttttgcttc
 1020
 agcatttggc cccattgtag attgcctgtg gcagtaaact ttcaagggtg cagctgcccc
 1080
 agattgcttc atttctggg tgtggaaaga gttgctatgg ccaggcatat gggatttgga
 1140
 agctcagcag aagtgacttc tgctctgtgg ttgctgctcc ccgcttttca cagacatggg
 1200
 atggcagcca ttcttttatc tatttaacca agaggatgct ggggaattgt gctgcttgct
 1260
 ctggttgctg gtggctgcat tatgtccg
 1288

<210> 5964
 <211> 222
 <212> PRT
 <213> Homo sapiens

<400> 5964
 Met Gly Leu Phe Gly Lys Thr Gln Glu Lys Pro Pro Lys Glu Leu Val
 1 5 10 15
 Asn Glu Trp Ser Leu Lys Ile Arg Lys Glu Met Arg Val Val Asp Arg
 20 25 30
 Gln Ile Arg Asp Ile Gln Arg Glu Glu Glu Lys Val Lys Arg Ser Val
 35 40 45
 Lys Asp Ala Ala Lys Lys Gly Gln Lys Asp Val Cys Ile Val Leu Ala
 50 55 60
 Lys Glu Met Ile Arg Ser Arg Lys Ala Val Ser Lys Leu Tyr Ala Ser
 65 70 75 80
 Lys Ala His Met Asn Ser Val Leu Met Gly Met Lys Asn Gln Leu Ala
 85 90 95
 Val Leu Arg Val Ala Gly Ser Leu Gln Lys Ser Thr Glu Val Met Lys
 100 105 110
 Ala Met Gln Ser Leu Val Lys Ile Pro Glu Ile Gln Ala Thr Met Arg
 115 120 125
 Glu Leu Ser Lys Glu Met Met Lys Ala Gly Ile Ile Glu Glu Met Leu
 130 135 140
 Glu Asp Thr Phe Glu Ser Met Asp Asp Gln Glu Met Glu Glu Glu
 145 150 155 160
 Ala Glu Met Glu Ile Asp Arg Ile Leu Phe Glu Ile Thr Ala Gly Ala
 165 170 175
 Leu Gly Lys Ala Pro Ser Lys Val Thr Asp Ala Leu Pro Glu Pro Glu
 180 185 190
 Pro Pro Gly Ala Met Ala Ala Ser Glu Asp Glu Glu Glu Glu Glu
 195 200 205
 Ala Leu Glu Ala Met Gln Ser Arg Leu Ala Thr Leu Arg Ser
 210 215 220

<210> 5965
 <211> 1011
 <212> DNA
 <213> Homo sapiens

<400> 5965
 gggaacgggt cttgtggctt tgtctccgc gaagaggaga tggcggagtc gttgaggtct
 60
 ccgcgcgcgt ccctgtacaa actgggtgggc tcgccgcctt ggaaagaggc ttcccggcag
 120
 agatgcctgg agagaatgag aaacagccgg gacaggctcc taaacaggta ccgccaggct
 180
 ggaagcagtg ggccaggga ttctcagaac agctttctag ttcaagaggt gatggaagaa
 240
 gagtggaatg ctttgcagnn tcagtgggag aattgtccag aagacttggc tcagtgggag
 300
 gagctgatag acatggctgt gctggaggaa attcaacagg agctgatcaa ccaagagcag
 360
 tccatcatca gcgagtatga gaagagcttg cagtttgatg aaaagtgtct cagcatcatg
 420
 ctggctgagt gggaggcaaa cccactcatc tgtcctgtat gtacaaagta caacctgaga
 480
 atcacaagcg gtgtggtggt gtgtcagtgt ggcctgtcca tccatctca ttcttctgag
 540
 ttgacagagc agaagcttcg tgcctgttta gagggtagta taaatgagca cagtgcacat
 600
 tgtccccaca cacctgaatt ttcagtcact ggaggaacag aagaaaagtc cagtcttctc
 660
 atgagctgtc tggcctgtga tacttgggct gtgatcctct agagccagct tggactcaca
 720
 tcattctatg ggggtgaaga caactcattc cctctgagga gccttgatca tacaagcctt
 780
 ttatttataa cttattttgt attgaaactt ttaaacaata ctgaagaaaa aaaaactttt
 840
 ccgacatctg ttcttggtct tttgtgacgc aggttgaagg gggaggaata gaaaaagaca
 900
 aactgccttg gaggagataa accaatttta tgtctatcat gttatacaaa aatctagaaa
 960
 taatagattt gtacagaaaa aatgataat aatgagaac acaaacata t
 1011

<210> 5966
 <211> 233
 <212> PRT
 <213> Homo sapiens

<400> 5966
 Gly Asn Gly Ser Cys Gly Phe Val Ser Arg Glu Glu Glu Met Ala Glu
 1 5 10 15
 Ser Leu Arg Ser Pro Arg Arg Ser Leu Tyr Lys Leu Val Gly Ser Pro
 20 25 30
 Pro Trp Lys Glu Ala Phe Arg Gln Arg Cys Leu Glu Arg Met Arg Asn
 35 40 45
 Ser Arg Asp Arg Leu Leu Asn Arg Tyr Arg Gln Ala Gly Ser Ser Gly
 50 55 60
 Pro Gly Asn Ser Gln Asn Ser Phe Leu Val Gln Glu Val Met Glu Glu
 65 70 75 80
 Glu Trp Asn Ala Leu Gln Xaa Gln Trp Xaa Asn Cys Pro Glu Asp Leu

	85		90		95										
Ala	Gln	Leu	Glu	Glu	Leu	Ile	Asp	Met	Ala	Val	Leu	Glu	Glu	Ile	Gln
	100		105		110										
Gln	Glu	Leu	Ile	Asn	Gln	Glu	Gln	Ser	Ile	Ile	Ser	Glu	Tyr	Glu	Lys
	115		120		125										
Ser	Leu	Gln	Phe	Asp	Glu	Lys	Cys	Leu	Ser	Ile	Met	Leu	Ala	Glu	Trp
	130		135		140										
Glu	Ala	Asn	Pro	Leu	Ile	Cys	Pro	Val	Cys	Thr	Lys	Tyr	Asn	Leu	Arg
145		150		155		160									
Ile	Thr	Ser	Gly	Val	Val	Val	Cys	Gln	Cys	Gly	Leu	Ser	Ile	Pro	Ser
	165		170		175										
His	Ser	Ser	Glu	Leu	Thr	Glu	Gln	Lys	Leu	Arg	Ala	Cys	Leu	Glu	Gly
	180		185		190										
Ser	Ile	Asn	Glu	His	Ser	Ala	His	Cys	Pro	His	Thr	Pro	Glu	Phe	Ser
	195		200		205										
Val	Thr	Gly	Gly	Thr	Glu	Glu	Lys	Ser	Ser	Leu	Leu	Met	Ser	Cys	Leu
	210		215		220										
Ala	Cys	Asp	Thr	Trp	Ala	Val	Ile	Leu							
225		230													

<210> 5967

<211> 1806

<212> DNA

<213> Homo sapiens

<400> 5967

natttttaaat ctctttttaa aaaactcaat ttttttttc acttactgat taaatcttga
60
gtcttttgcc tccagtggat cagtgatttt tcagcagaaa atctttcttc tccattgctt
120
tgtgcttttg ttgctaggca gtcaacagca gggctactaa agcacttcta atttagacaa
180
atcttttctt ctattttaga aatggatttc aatggtgttc agtttgtttg cagaaaccta
240
ctgaaagtga gcatgttttt gaacacatta acaccgaagt tctacgtggc cctaacaggc
300
acttcttcac taatatcagg gcttattttg atatttgaat ggtggtattt tcgcaaatac
360
ggaacttcat tcattgaaca agtctcagta agccacttgc gcccccttct gggagggggt
420
gacaacaact cttccaacaa ttctaattcc agtaacgggg actcagattc caataggcaa
480
agtgtctcag aatgcaaagt atggcgaaat ccactaaatt tatttagggg tgctgaatac
540
aatcggtata cttgggtgac aggacgagag cctcttactt actatgacat gaatctctct
600
gccaagacc accagacatt ctttacttgt gactcggacc atctgcgtcc cgcagatgca
660
ataatgcaga aagcctggag agagagaaac cccaagcta ggatttctgc agtcatgaa
720
gccttgga taaatgagac gagacaccaa tgtcttggtg tacatcaaaa gaaggctagc
780
aatgtgtgcc agaagactcg ggaggaccag ggaagcaaag ccttcttga actacaagca
840

tatgctgatg ttcaggcagt cttagcaaag tatgatgata taagcttacc aaagtcagca
 900
 acaatatgct acacagctgc tttgctcaaa gcaagagctg tctctgacaa attctctcct
 960
 gaggetgcat ctctggcggg gctgagcaca gcagagatga atgcagtaga ggccattcat
 1020
 agagctgtgg aattcaatcc tcatgtgcca aaatacctac tagaaatgaa aagcttaate
 1080
 ctacccccag aacatatcct gaagagagga gacagtgaag caatagcata tgcattcttt
 1140
 catcttgacac actggaagag agtgggaagg gctttgaatc ttttgattg tacgtgggaa
 1200
 ggcacttttc ggatgatccc ttatcccttg gaaaaggggc acctatttta tccttaccca
 1260
 atctgtacag aaacagcaga ccgagagctg cttccatctt tccatgaagt ctcagtttac
 1320
 ccaaagaagg agcttccctt ctttattctc tttactgctg gattatgttc cttcacagcc
 1380
 atgtggccc tctgacaca tcagttcccg gaacttatgg gggctctcgc aaaagctgtg
 1440
 agtgtttgcc tagagggagg ccttggggaa tggatgggga aagccaaggg cataaaagca
 1500
 gcgtgagaga aatgggggtg ccttacagaa atgggtacga gcctgcaaag atcattgctc
 1560
 accatttaac tttcatgac gtcaatggaa tcaaagcatt aagggtcaaa tgagaaagt
 1620
 caggttggtta ctgcatgcct tgcctcattt cacaacaaat tcttagcagt ttccaaaaa
 1680
 tgcaggaggt ccaaaaggat ggaatgattt aggaaatcct agcaaatgaa aatgtgtggg
 1740
 aagttactcg gttttctgta aattgaatga cattatttcc aatcgttga tattgtgggt
 1800
 ctttcc
 1806

<210> 5968

<211> 434

<212> PRT

<213> Homo sapiens

<400> 5968

Met	Asp	Phe	Asn	Gly	Val	Gln	Phe	Val	Cys	Arg	Asn	Leu	Leu	Lys	Val
1			5						10					15	
Ser	Met	Phe	Leu	Asn	Thr	Leu	Thr	Pro	Lys	Phe	Tyr	Val	Ala	Leu	Thr
		20						25					30		
Gly	Thr	Ser	Ser	Leu	Ile	Ser	Gly	Leu	Ile	Leu	Ile	Phe	Glu	Trp	Trp
		35				40						45			
Tyr	Phe	Arg	Lys	Tyr	Gly	Thr	Ser	Phe	Ile	Glu	Gln	Val	Ser	Val	Ser
	50					55				60					
His	Leu	Arg	Pro	Leu	Leu	Gly	Gly	Val	Asp	Asn	Asn	Ser	Ser	Asn	Asn
65				70				75						80	
Ser	Asn	Ser	Ser	Asn	Gly	Asp	Ser	Asp	Ser	Asn	Arg	Gln	Ser	Val	Ser
			85					90					95		
Glu	Cys	Lys	Val	Trp	Arg	Asn	Pro	Leu	Asn	Leu	Phe	Arg	Gly	Ala	Glu

				100					105					110			
Tyr	Asn	Arg	Tyr	Thr	Trp	Val	Thr	Gly	Arg	Glu	Pro	Leu	Thr	Tyr	Tyr		
		115					120					125					
Asp	Met	Asn	Leu	Ser	Ala	Gln	Asp	His	Gln	Thr	Phe	Phe	Thr	Cys	Asp		
	130					135					140						
Ser	Asp	His	Leu	Arg	Pro	Ala	Asp	Ala	Ile	Met	Gln	Lys	Ala	Trp	Arg		
145					150					155					160		
Glu	Arg	Asn	Pro	Gln	Ala	Arg	Ile	Ser	Ala	Ala	His	Glu	Ala	Leu	Glu		
				165					170					175			
Ile	Asn	Glu	Thr	Arg	His	Gln	Cys	Leu	Gly	Val	His	Gln	Lys	Lys	Ala		
			180						185				190				
Ser	Asn	Val	Cys	Gln	Lys	Thr	Arg	Glu	Asp	Gln	Gly	Ser	Lys	Ala	Leu		
	195						200				205						
Leu	Glu	Leu	Gln	Ala	Tyr	Ala	Asp	Val	Gln	Ala	Val	Leu	Ala	Lys	Tyr		
	210					215					220						
Asp	Asp	Ile	Ser	Leu	Pro	Lys	Ser	Ala	Thr	Ile	Cys	Tyr	Thr	Ala	Ala		
225					230					235					240		
Leu	Leu	Lys	Ala	Arg	Ala	Val	Ser	Asp	Lys	Phe	Ser	Pro	Glu	Ala	Ala		
			245						250					255			
Ser	Arg	Arg	Gly	Leu	Ser	Thr	Ala	Glu	Met	Asn	Ala	Val	Glu	Ala	Ile		
			260					265					270				
His	Arg	Ala	Val	Glu	Phe	Asn	Pro	His	Val	Pro	Lys	Tyr	Leu	Leu	Glu		
	275						280				285						
Met	Lys	Ser	Leu	Ile	Leu	Pro	Pro	Glu	His	Ile	Leu	Lys	Arg	Gly	Asp		
	290					295					300						
Ser	Glu	Ala	Ile	Ala	Tyr	Ala	Phe	Phe	His	Leu	Ala	His	Trp	Lys	Arg		
305				310						315					320		
Val	Glu	Gly	Ala	Leu	Asn	Leu	Leu	His	Cys	Thr	Trp	Glu	Gly	Thr	Phe		
			325						330					335			
Arg	Met	Ile	Pro	Tyr	Pro	Leu	Glu	Lys	Gly	His	Leu	Phe	Tyr	Pro	Tyr		
			340					345					350				
Pro	Ile	Cys	Thr	Glu	Thr	Ala	Asp	Arg	Glu	Leu	Leu	Pro	Ser	Phe	His		
	355						360					365					
Glu	Val	Ser	Val	Tyr	Pro	Lys	Lys	Glu	Leu	Pro	Phe	Phe	Ile	Leu	Phe		
	370					375					380						
Thr	Ala	Gly	Leu	Cys	Ser	Phe	Thr	Ala	Met	Leu	Ala	Leu	Leu	Thr	His		
385				390						395					400		
Gln	Phe	Pro	Glu	Leu	Met	Gly	Val	Phe	Ala	Lys	Ala	Val	Ser	Val	Cys		
			405						410					415			
Leu	Glu	Gly	Gly	Leu	Gly	Glu	Trp	Met	Gly	Lys	Ala	Lys	Gly	Ile	Lys		
			4														

```
<210> 5969
<211> 429
<212> DNA
<213> Homo sapiens
```

```
<400> 5969
cgggccgccc tgtgtgacgt cagggagctg caggcccagg aagccttgca gaacggccag
60
ctgggcggcg gggaaggggt cccggatctg cagcctgggg tcttggccag ccaggccatg
120
```

attgagaaga tcctgagcga ggacccccgg tggcaagatg ccaacttcgt gctggggcagc
 180
 tacaagacgg agcagtgtccc gaagccgcca cgccctgtgcc gccagggtta tgcgtgccc
 240
 cactaccaca atagccggga caggcggcgc aacccccggc ggttccagta caggtccacg
 300
 ccttgccccca gcgtgaagca cgggggatgag tggggggaac cctcacgctg cgatggcggc
 360
 gacggctgcc agtattgcca ctcccgacg gagcagcagt tccatcccga gatctacaaa
 420
 tctacaaaa
 429

<210> 5970

<211> 143

<212> PRT

<213> Homo sapiens

<400> 5970

Arg	Pro	Pro	Val	Cys	Asp	Val	Arg	Glu	Leu	Gln	Ala	Gln	Glu	Ala	Leu
1				5					10					15	
Gln	Asn	Gly	Gln	Leu	Gly	Gly	Gly	Glu	Gly	Val	Pro	Asp	Leu	Gln	Pro
		20						25					30		
Gly	Val	Leu	Ala	Ser	Gln	Ala	Met	Ile	Glu	Lys	Ile	Leu	Ser	Glu	Asp
		35					40					45			
Pro	Arg	Trp	Gln	Asp	Ala	Asn	Phe	Val	Leu	Gly	Ser	Tyr	Lys	Thr	Glu
		50				55					60				
Gln	Cys	Pro	Lys	Pro	Pro	Arg	Leu	Cys	Arg	Gln	Gly	Tyr	Ala	Cys	Pro
65					70				75					80	
His	Tyr	His	Asn	Ser	Arg	Asp	Arg	Arg	Arg	Asn	Pro	Arg	Arg	Phe	Gln
			85						90					95	
Tyr	Arg	Ser	Thr	Pro	Cys	Pro	Ser	Val	Lys	His	Gly	Asp	Glu	Trp	Gly
			100					105					110		
Glu	Pro	Ser	Arg	Cys	Asp	Gly	Gly	Asp	Gly	Cys	Gln	Tyr	Cys	His	Ser
		115				120						125			
Arg	Thr	Glu	Gln	Gln	Phe	His	Pro	Glu	Ile	Tyr	Lys	Ser	Thr	Lys	
		130				135						140			

<210> 5971

<211> 565

<212> DNA

<213> Homo sapiens

<400> 5971

gcgcgcccatt ttcggagagt tccctcagcc ccaggactct ggatgtagcc gttttcatgc
 60
 tgtgaatagc acagtcttcc ctttcatgtg gcaactgaagt taaaatgcat agagctcttt
 120
 catgtccett aggtcagcta agccacatc agtgtccaaa taggcaacat ccctatttta
 180
 tagatggtea tccccatttt agagatagct cccttttata tccccatttt acaggatgaag
 240
 gaattgaggc acagaagggt aggtcacttc tgcaagatga ccagctgaac caaaatttca
 300

gggcttcaaa caccaaagt gtcccttgt cttccgttc ccacttgett ccagagggct
 360
 cagcaagtag cctctggcca ctgagcatcc tcccggccac tttgtccct gcctcctgat
 420
 ccaggactg tggccgtgga tgccagagcg aggatgtgaa tcctgttggg ttctgaagcc
 480
 cacacctacc ctgagccttg aagctgcagc aatggctgct tccagatgag cacaccctcg
 540
 ggggtgcangc gtccagtgtc acgat
 565

<210> 5972
 <211> 104
 <212> PRT
 <213> Homo sapiens

<400> 5972
 Met His Arg Ala Leu Ser Cys Pro Leu Gly Gln Leu Ser Pro His Gln
 1 5 10 15
 Cys Pro Asn Arg Gln His Pro Tyr Phe Ile Asp Gly His Pro His Phe
 20 25 30
 Arg Asp Ser Ser Leu Leu Tyr Pro His Phe Thr Gly Glu Gly Ile Glu
 35 40 45
 Ala Gln Lys Val Arg Ser Leu Leu Gln Asp Asp Gln Leu Asn Gln Asn
 50 55 60
 Phe Arg Ala Ser Asn Thr Lys Cys Val Pro Leu Ser Ser Val Ser His
 65 70 75 80
 Leu Leu Pro Arg Gly Ser Ala Ser Ser Leu Trp Pro Leu Ser Ile Leu
 85 90 95
 Pro Pro Thr Leu Leu Pro Ala Ser
 100

<210> 5973
 <211> 797
 <212> DNA
 <213> Homo sapiens

<400> 5973
 gggcccaggg ggggctttcc caacactggg cgcagtcatt gttggtataa cggctagaga
 60
 cgccagtgga gttagcatgg agggcagtg gaccggaaaa agacgtggaa aagctgcgaa
 120
 aacgagcctt cgaatcatgg acgcgcgggc ccagtcctc ctccgagttc ctcatccggg
 180
 gccgtcactc acatccgggg cctcactca catccgggac cctcatccgg ggetctcacc
 240
 cacatccggg accctcatgc ctgggcggag gagggggggc ccttcattcg ggaccctgc
 300
 actccgtcgc cggaagtgc accgagaagc gcggcctcg gggctgtcta cagcggcccg
 360
 ggagaggetg tgggtggccc gagcgcgagt gtgtagtgga caggacagcg gccaggcccc
 420
 cccctccctt cggtagtagc ccggaagcg ttttggggtc gcagcggggg ggcagcttgt
 480

ttgacctca cgggagtaga agggagcggc gtccgccgcg gccgacggta gttcgcttcc
 540
 ccgagagtgc gcggaggccc ggggtgcgagg agggcctggt tctcttcagc cctggttcat
 600
 tcacctcgcg gaccgagggc ccgcgcagc gagccggcga ccgtgccctg gtgcgagctg
 660
 gtctgtatgt cctcactggt ccttttggga ctttgccctg gctcgttgc tctcaggatt
 720
 ccgggaaaag gccggtctag ctggtctgag ttagcgaagg gctgacccc aaaagtggat
 780
 tttcctcggt ccgaatt
 797

<210> 5974

<211> 107

<212> PRT

<213> Homo sapiens

<400> 5974

Met	Glu	Gly	Ser	Gly	Thr	Gly	Lys	Arg	Arg	Gly	Lys	Ala	Ala	Lys	Thr
1				5					10					15	
Ser	Leu	Arg	Ile	Met	Asp	Ala	Arg	Ala	Gln	Leu	Leu	Leu	Arg	Val	Pro
			20				25						30		
His	Pro	Gly	Pro	Ser	Leu	Thr	Ser	Gly	Ala	Leu	Thr	His	Ile	Arg	Asp
		35				40					45				
Pro	His	Pro	Gly	Leu	Ser	Pro	Thr	Ser	Gly	Thr	Leu	Met	Pro	Gly	Arg
		50				55				60					
Arg	Arg	Gly	Gly	Pro	Ser	Phe	Gly	Thr	Pro	Ala	Leu	Arg	Arg	Arg	Lys
65				70					75					80	
Cys	His	Arg	Glu	Ala	Pro	Ala	Ser	Gly	Leu	Ser	Thr	Ala	Ala	Arg	Glu
			85					90						95	
Arg	Leu	Trp	Trp	Pro	Arg	Ala	Arg	Val	Cys	Arg					
			100					105							

<210> 5975

<211> 2175

<212> DNA

<213> Homo sapiens

<400> 5975

nntcaggtca ccacatacta ttatgttggg ttgcatatt tgatgatgcg tcgttaccag
 60
 gatgccatcc gggctcttcgc caacatcctc ctctacatcc agaggacca gagcatgttc
 120
 cagagggccca cgtacaagta tgagatgatt aacaagcaga atgagcagat gcatgcgctg
 180
 ctggccattg ccttcacgat gtaccccatg cgtatcgatg agagcattca cctccagctg
 240
 cgggagaaat atggggacaa gatgttgccg atgtcttacc ccgctgatga ttatgagtct
 300
 gaggcggctt atgacccta cgttatccc agcgactatg atatgcacac aggagatcca
 360
 aagcaggacc ttgcttatga acgtcagtat gaacagcaaa cctatcaggt gatccctgag
 420

gtgatcaaaa acttcatcca gtatttccac aaaactgtct cagatttgat tgaccagaaa
480
gtgtatgagc tacaggccag tcgtgtctcc agtgatgtca ttgaccagaa ggtgtatgag
540
atccaggaca tctatgagaa cagctggacc aagctgactg aaagattctt caagaatata
600
ccttgccccg aggtgaagc cattgtctca caggttgga atgatgctgt ctctctgatt
660
ttatacaaag aattatacta caggcacata tatgccaaag tcagtggggg accttccttg
720
gagcagaggt ttgaatccta ttacaactac tgcaatctct tcaactacat tcttaatgcc
780
gatggctctg ctccccctga actaccaaac cagtggctct gggatattat cgatgagttc
840
atctaccagt ttcagtcatt cagtcagtac cgctgtaaga ctgccaagaa gtcagaggag
900
gagattgact ttcttcgttc caatcccaaa atctggaatg ttcatagtgt cctcaatgtc
960
cttcattccc tggtagacaa atccaacatc aaccgacagt tggaggata cacaagcgga
1020
ggtgacctg agagtgtggc tggggagtat gggcggcact ccctctacaa aatgcttgg
1080
tacttcagcc tggtegggt tctccgctg cactccctgt taggagatta ctaccaggcc
1140
atcaagggtc tggagaacat cgaactgaac aagaagagta tgtattcccg tgtgccagag
1200
tgccaggtea ccacatacta ttatgttggg tttgcatatt tgatgatgcg tegtaccag
1260
gatgccatcc gggctctcgc caacatcctc ctctacatcc agaggaccaa gagcatgttc
1320
cagaggacca cgtacaagta tgagatgatt aacaagcaga atgagcagat gcatgcgctg
1380
ctggccattg ccctcacgat gtaccccatg cgtatcgatg agagcattca cctccagctg
1440
cgggagaaat atggggacaa gatgttgcg atgcagaaag gtgaccaca agtctatgaa
1500
gaaactttca gttactcctg ccccaagttc ctgtcgctg tagtgccaa ctatgataat
1560
gtgcaccca actaccaca agagccctc ctgcagcagc tgaagggtgtt ttctgatgaa
1620
gtacagcagc aggccagct ttcaaccatc cgcagcttc tgaagctcta caccaccatg
1680
cctgtggcca agctggctgg ctctctggac ctcacagagc aggagtccg gatccagctt
1740
cttgtcttca aacacaagat gaagaacctc gtgtggacca gcggtatctc agccctggat
1800
ggtgaatttc agtcagctc agaggttgac ttctacattg ataaggacat gatccacatc
1860
gcggacacca aggtcgccag gcgttatggg gatttcttca tccgtcagat ccacaaattt
1920
gaggagctta atcgaacctt gaagaagatg ggacagagac cttgatgata ttcacacaca
1980
ttcaggaacc tgttttgatg tattataggc aggaagtgtt tttgctaccg tgaaaccttt
2040

acctagatca gccatcagcc tgtcaactca gttaacaagt taaggaccga agtgtttcaa
 2100
 gtggatctca gtaaaggatc ttggagcca gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2160
 aaaaaaaaaa aaaaaa
 2175

<210> 5976

<211> 564

<212> PRT

<213> Homo sapiens

<400> 5976

Met	Ser	Tyr	Pro	Ala	Asp	Asp	Tyr	Glu	Ser	Glu	Ala	Ala	Tyr	Asp	Pro
1				5					10					15	
Tyr	Ala	Tyr	Pro	Ser	Asp	Tyr	Asp	Met	His	Thr	Gly	Asp	Pro	Lys	Gln
			20					25					30		
Asp	Leu	Ala	Tyr	Glu	Arg	Gln	Tyr	Glu	Gln	Gln	Thr	Tyr	Gln	Val	Ile
	35						40					45			
Pro	Glu	Val	Ile	Lys	Asn	Phe	Ile	Gln	Tyr	Phe	His	Lys	Thr	Val	Ser
	50					55				60					
Asp	Leu	Ile	Asp	Gln	Lys	Val	Tyr	Glu	Leu	Gln	Ala	Ser	Arg	Val	Ser
65					70				75					80	
Ser	Asp	Val	Ile	Asp	Gln	Lys	Val	Tyr	Glu	Ile	Gln	Asp	Ile	Tyr	Glu
				85					90					95	
Asn	Ser	Trp	Thr	Lys	Leu	Thr	Glu	Arg	Phe	Phe	Lys	Asn	Thr	Pro	Trp
			100					105						110	
Pro	Glu	Ala	Glu	Ala	Ile	Ala	Pro	Gln	Val	Gly	Asn	Asp	Ala	Val	Phe
		115					120					125			
Leu	Ile	Leu	Tyr	Lys	Glu	Leu	Tyr	Tyr	Arg	His	Ile	Tyr	Ala	Lys	Val
	130					135					140				
Ser	Gly	Gly	Pro	Ser	Leu	Gln	Arg	Phe	Glu	Ser	Tyr	Tyr	Asn	Tyr	
145					150				155					160	
Cys	Asn	Leu	Phe	Asn	Tyr	Ile	Leu	Asn	Ala	Asp	Gly	Pro	Ala	Pro	Leu
			165						170					175	
Glu	Leu	Pro	Asn	Gln	Trp	Leu	Trp	Asp	Ile	Ile	Asp	Glu	Phe	Ile	Tyr
			180					185						190	
Gln	Phe	Gln	Ser	Phe	Ser	Gln	Tyr	Arg	Cys	Lys	Thr	Ala	Lys	Lys	Ser
			195				200					205			
Glu	Glu	Glu	Ile	Asp	Phe	Leu	Arg	Ser	Asn	Pro	Lys	Ile	Trp	Asn	Val
	210					215					220				
His	Ser	Val	Leu	Asn	Val	Leu	His	Ser	Leu	Val	Asp	Lys	Ser	Asn	Ile
225				230					235					240	
Asn	Arg	Gln	Leu	Glu	Val	Tyr	Thr	Ser	Gly	Gly	Asp	Pro	Glu	Ser	Val
			245						250					255	
Ala	Gly	Glu	Tyr	Gly	Arg	His	Ser	Leu	Tyr	Lys	Met	Leu	Gly	Tyr	Phe
		260					265						270		
Ser	Leu	Val	Gly	Leu	Leu	Arg	Leu	His	Ser	Leu	Leu	Gly	Asp	Tyr	Tyr
	275					280						285			
Gln	Ala	Ile	Lys	Val	Leu	Glu	Asn	Ile	Glu	Leu	Asn	Lys	Lys	Ser	Met
	290					295					300				
Tyr	Ser	Arg	Val	Pro	Glu	Cys	Gln	Val	Thr	Thr	Tyr	Tyr	Tyr	Val	Gly
305					310					315				320	
Phe	Ala	Tyr	Leu	Met	Met	Arg	Arg	Tyr	Gln	Asp	Ala	Ile	Arg	Val	Phe

```

          325          330          335
Ala Asn Ile Leu Leu Tyr Ile Gln Arg Thr Lys Ser Met Phe Gln Arg
          340          345          350
Thr Thr Tyr Lys Tyr Glu Met Ile Asn Lys Gln Asn Glu Gln Met His
          355          360          365
Ala Leu Leu Ala Ile Ala Leu Thr Met Tyr Pro Met Arg Ile Asp Glu
          370          375          380
Ser Ile His Leu Gln Leu Arg Glu Lys Tyr Gly Asp Lys Met Leu Arg
          385          390          395          400
Met Gln Lys Gly Asp Pro Gln Val Tyr Glu Glu Leu Phe Ser Tyr Ser
          405          410          415
Cys Pro Lys Phe Leu Ser Pro Val Val Pro Asn Tyr Asp Asn Val His
          420          425          430
Pro Asn Tyr His Lys Glu Pro Phe Leu Gln Gln Leu Lys Val Phe Ser
          435          440          445
Asp Glu Val Gln Gln Gln Ala Gln Leu Ser Thr Ile Arg Ser Phe Leu
          450          455          460
Lys Leu Tyr Thr Thr Met Pro Val Ala Lys Leu Ala Gly Phe Leu Asp
          465          470          475          480
Leu Thr Glu Gln Glu Phe Arg Ile Gln Leu Leu Val Phe Lys His Lys
          485          490          495
Met Lys Asn Leu Val Trp Thr Ser Gly Ile Ser Ala Leu Asp Gly Glu
          500          505          510
Phe Gln Ser Ala Ser Glu Val Asp Phe Tyr Ile Asp Lys Asp Met Ile
          515          520          525
His Ile Ala Asp Thr Lys Val Ala Arg Arg Tyr Gly Asp Phe Phe Ile
          530          535          540
Arg Gln Ile His Lys Phe Glu Glu Leu Asn Arg Thr Leu Lys Lys Met
          545          550          555          560
Gly Gln Arg Pro

```

<210> 5977
 <211> 2320
 <212> DNA
 <213> Homo sapiens

<400> 5977
 naactttctt tagatttgct tttgcttttt ccaacttctt ttatttctat tatacttata
 60
 attttgcttt ttgccctatc tttcattaga aacttttcgc aaatgtctgt taaatgctac
 120
 ccagtgact ttgggcttgg tcatgtctact tgctttgggc aatgaaatgt gagtagacat
 180
 caagtatacc accatcacac agaaatttta ttttttattt tattttttat agagacaggg
 240
 tctcactaca ttgcctagat tgggtctcaaa ctcttgggct caagcaatct tcctcttctt
 300
 ggctcccaa agtgttggga ttgcaggtgt ggcgcactac gccagcttg aaaaattttt
 360
 taatgcattg ggtaatccac aggagatcac atttagtata tgaccaagtt aattaagaag
 420
 tcaaaaaaca cgttaaattt aagcagaata aggctggggt cggtggctca tgctgtgat
 480

cccagcactt tgggaggcag aggtgggcag atcattnagg ccaggagttc gagaccagcc
540
tggacaacat ggcganaagt ctttactaaa aatacaaaaa tcagctgggc gtggtggtac
600
acacccgtga tcccagctac tcaggaggct taggcacatg atncgcttga acctgggaga
660
tggaagctgc agtaagctag atcctgccac tgtactccag cctgggtgac agatcaagac
720
tctaactaaa aaacccccca aaaaacaaat agttacttgg aaaacttccg acattttattt
780
acttctggac aaacaaatga gtgggaagaa tcaagtatac acctcttaat tgtatttttt
840
tttttttttg agacagagtc ttgctctgtc gcccaggctg gagtacagtg gacgatctca
900
gctcaactga acctttgcct cccgggttca ggtgattctc ctgcctcagc cccccagta
960
gccgggatta taggcattga gaaccacacc tggctagttt ttgtattttt agtagagatg
1020
aagtttcacc atgttggcct ggctgggtctc aaactcctga cctcaagtga tctgccgcgc
1080
tgggtctcta aagtgttggg attacaggcg tgagccaccg tgcctggcca atgttagttt
1140
ttatccttaa aattgcctga gttcttagaa cacagaaaaa acaaatttga atgcattttt
1200
aacagcttaa taatttatat gtcccattat gattttagcg gaatgtttta aagcaaagca
1260
taattcactg caaagataaa cctgaaaaag caaacaaact tacaatgggt atgttatgac
1320
ctagacaaaa ctgattatca actagtaata ctcataatta gcacatgcaa cagattgaga
1380
aattaaatcc tgtgtatat actcttaagt attttgcag atatatcttt aaatgttcta
1440
tcaattgcat tctttccac acatatttta aacaagaaaa caattgtctt tctccagat
1500
tctcatgttt atcagtgcaa aacgttgcaa tctcagtaaa aatggtttat tacaatgtta
1560
ttttagaaaag gcttagtcct caaactgttg aaaatgtact taaaagatgt ccaaactcatg
1620
agaatgatca acttcaatgg ctctctctgc ctccaacttg gcttctgcat gtccttctg
1680
tgactcatca agagaggcca aggcctcatt cgtgtcactt gcaaaagttt ctcgtgatgt
1740
atcatcatct tcttgaaaat ttagactttt aatagcttgt ttcatctttt tccccaacac
1800
ttgtgttctc ctcttctag cagctttttt attttcatat tcttttgggt tttcaatgta
1860
gaaaatgtcc ttaatttggt cctcgtgat actaggagtg tttttcaaga gattcagaaa
1920
aaactccact ggtgttcttc ttcgactacc attcattata aagagaccac cattttgttc
1980
aaactcagcg gtttccatca gaagttcaat tgcctttttg ttaccaataa tctcactac
2040
tcgggctatc aggtctttct ttgggttctg taacctgaat gaaatttcat cagccacttt
2100

ctcttgagaa tcttccgctg tgatctcgta tcgaccttta tagttcattt ctggctctgt
 2160
 ccctagcctg tctttgacag gtcgtttcct tttgagatga ccttgcccat tttcctcttc
 2220
 ctttgatccc atttttttgc caccatgcat atattcatct agttccttgt ctagatcctt
 2280
 tgtatgctct tgagattcct tcctaagttt cttggcaagc
 2320

<210> 5978
 <211> 77
 <212> PRT
 <213> Homo sapiens

<400> 5978
 Met Thr Lys Leu Ile Lys Lys Ser Lys Asn Thr Leu Asn Leu Ser Arg
 1 5 10 15
 Ile Arg Leu Gly Ser Val Ala His Ala Cys Asp Pro Ser Thr Leu Gly
 20 25 30
 Gly Arg Gly Gly Gln Ile Ile Xaa Ala Arg Ser Ser Arg Pro Ala Trp
 35 40 45
 Thr Thr Trp Arg Xaa Val Phe Thr Lys Asn Thr Lys Ile Ser Trp Ala
 50 55 60
 Trp Trp Tyr Thr Pro Val Ile Pro Ala Thr Gln Glu Ala
 65 70 75

<210> 5979
 <211> 1095
 <212> DNA
 <213> Homo sapiens

<400> 5979
 nntttctttt ttgagacgac gtcttgctct gtcacccagg ctagagtga atggcacgat
 60
 ctcggctcac tgtagccttg acctcctggg ctcaagcgat ctccgcctca gcctcccgag
 120
 tagctgcgac cacaggcctg tgcagcactc ctggcttget gccattgta tagatgagga
 180
 aattgaggcc taaggcaggg tcacttgctt ggcctcttc ccttcacccg tcagagtcca
 240
 gacaggagg ggacgtcccc tgacccccgc tgctctgtgc ttccaggga agaagactat
 300
 gaccggctgc ggccctgtc ctaccagaac acccacctcg tgctcatctg ctatgacgtc
 360
 atgaatccca ccagctacga caacgtctc atcaagtggg tcctgaggt caagcatttc
 420
 tgccgcggga tccccatggt gctcatcggc tgcaagacag acctgaggaa ggacaaggag
 480
 cagctgcgga agctccgggc cgcccagctg gagcccatca cctacatgca gggcctgagc
 540
 gcctgcgaac agatccgagc tgctctctac ctggaatgtt ccgccaagtt tcgggagaat
 600
 gtggaggacg tcttcggga ggcgcgaag gtggctctca gcgctctgaa gaaggcgcaa
 660

cggcagaaga agcgccggct ctgctgctg ctctgacca gggcagacag acctcacgac
 720
 agcactgaca gggcccgggg gccaggtgc cgattgcacc agggaggctg ccccatcccg
 780
 accctccagc tcatggtgtc tggggcctgc ggctagactc ttggaacatt ctggaactct
 840
 ctcccttctt ggctggggct ctgaccacaa actccctcc aggtgcccc tgggacatgg
 900
 tggatgatgt ggtgcaggag ccagtgtctg ttgttgggac tcgcaagtgc cctcatcaca
 960
 gccaccccca ccacgagtgt ctccccagtgc cagactcaag ttatgcttga aatgaaaaag
 1020
 tctatctggt agtgggtaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1080
 aaaaaaaaaa aaaaa
 1095

<210> 5980

<211> 169

<212> PRT

<213> Homo sapiens

<400> 5980

Gly	Leu	Arg	Gln	Gly	His	Leu	Pro	Gly	Pro	Phe	Pro	Phe	Thr	Arg	Gln
1				5					10					15	
Ser	Pro	Asp	Arg	Glu	Gly	Thr	Ser	Pro	Asp	Pro	Arg	Cys	Ser	Val	Leu
			20					25					30		
Ser	Gly	Gln	Glu	Asp	Tyr	Asp	Arg	Leu	Arg	Pro	Leu	Ser	Tyr	Gln	Asn
		35				40					45				
Thr	His	Leu	Val	Leu	Ile	Cys	Tyr	Asp	Val	Met	Asn	Pro	Thr	Ser	Tyr
	50					55				60					
Asp	Asn	Val	Leu	Ile	Lys	Trp	Phe	Pro	Glu	Val	Thr	His	Phe	Cys	Arg
65					70				75					80	
Gly	Ile	Pro	Met	Val	Leu	Ile	Gly	Cys	Lys	Thr	Asp	Leu	Arg	Lys	Asp
			85					90					95		
Lys	Glu	Gln	Leu	Arg	Lys	Leu	Arg	Ala	Ala	Gln	Leu	Glu	Pro	Ile	Thr
		100					105						110		
Tyr	Met	Gln	Gly	Leu	Ser	Ala	Cys	Glu	Gln	Ile	Arg	Ala	Ala	Leu	Tyr
	115					120					125				
Leu	Glu	Cys	Ser	Ala	Lys	Phe	Arg	Glu	Asn	Val	Glu	Asp	Val	Phe	Arg
	130				135					140					
Glu	Ala	Ala	Lys	Val	Ala	Leu	Ser	Ala	Leu	Lys	Lys	Ala	Gln	Arg	Gln
145				150					155					160	
Lys	Lys	Arg	Arg	Leu	Cys	Leu	Leu	Leu							
				165											

<210> 5981

<211> 677

<212> DNA

<213> Homo sapiens

<400> 5981

cgtttccccc agcccttgcg cccggcccca acgagaggtc cggagccccg gcgcggggcg
 60

acccacagag aacgtggggt ccaggttctt tctgcacctt cccagcacat gcagaatgac
 1200
 tccagtgggt ccategtccc ctctgccc gtgtacctgc ttgcctttct cagctgcccc
 1260
 acctcccctg ggctggccca ctcaccaca gtggaagtgc ccgggatctg cacttcctcc
 1320
 cctttcacct acctgtacac ctaacctggc cttagactga gctttattta agaataaaat
 1380
 cgtgggtggt gtccttttgt ctcaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1440
 aaaa
 1444

<210> 5988
 <211> 216
 <212> PRT
 <213> Homo sapiens

<400> 5988
 Gly Gly Asp His Arg Val Glu Leu Tyr Lys Val Leu Ser Ser Leu Gly
 1 5 10 15
 Tyr His Val Val Thr Phe Asp Tyr Arg Gly Trp Gly Asp Ser Val Gly
 20 25 30
 Thr Pro Ser Glu Arg Gly Met Thr Tyr Asp Ala Leu His Val Phe Asp
 35 40 45
 Trp Ile Lys Ala Arg Ser Gly Asp Asn Pro Val Tyr Ile Trp Gly His
 50 55 60
 Ser Leu Gly Thr Gly Val Ala Thr Ile Trp Cys Gly Ala Ser Val Ser
 65 70 75 80
 Glu Thr Pro Pro Asp Ala Leu Ile Leu Glu Ser Pro Phe Thr Asn Ile
 85 90 95
 Arg Glu Glu Ala Lys Ser His Pro Phe Ser Val Ile Tyr Arg Tyr Phe
 100 105 110
 Pro Gly Phe Asp Trp Phe Phe Leu Asp Pro Ile Thr Ser Ser Gly Ile
 115 120 125
 Lys Phe Ala Asn Asp Glu Asn Val Lys His Ile Ser Cys Pro Leu Leu
 130 135 140
 Ile Leu His Ala Glu Asp Asp Pro Val Val Pro Phe Gln Leu Gly Arg
 145 150 155 160
 Lys Leu Tyr Ser Ile Ala Ala Pro Ala Arg Ser Phe Arg Asp Phe Lys
 165 170 175
 Val Gln Phe Val Pro Phe His Ser Asp Leu Gly Tyr Arg His Lys Tyr
 180 185 190
 Ile Tyr Lys Ser Pro Glu Leu Pro Arg Ile Leu Arg Glu Phe Leu Gly
 195 200 205
 Lys Ser Glu Pro Glu His Gln His
 210 215

<210> 5989
 <211> 1583
 <212> DNA
 <213> Homo sapiens

<400> 5989

gccccctgat cagttctttg ggggtgctttt taaagtttcc caggatcccg atgttgatcat
60
acactccgaa catggccctt ttctcgttcc aacgatcaac cactttgggg ggcgggagag
120
tgagccttat accgatcaat ctaggcacac ctcttttctt gggggtgact gaatgccag
180
ccagggacgc gacgtctctg gccagcagaa atacggcctc tccccgccg actgggcaaa
240
gggggacagc aagtgtccca tcacccaccc atctcttgct tctactgtga gtgcgaggag
300
aagagactgt gcgtcaacac tcatgtatgg accaaaagca agttcatggg catgtccgtg
360
ggggtctcta tgatagggga aggtgtgttg aggtccttg aacacgggga ggagtacgta
420
ttcacctcgc ctagtgccta cggccgttcc attctcacca tcccggtggg ggagctcgga
480
ggaaaagtca gcatcaactg tgccaagact gggactcag cgacagtgt attccacag
540
aagcctttct atggagggaa agtccacagg gttaccgag aagtgaagca caaccaccc
600
aacaccattg tttgtaaagc ccatggggaa tggaatggta ctttagagtt cacctacaac
660
aatggagaaa ccaaagtcac cgacacaacc aactgccag tgtatccaa gaagatcaga
720
cctcttgaga agcagggacc catggagtcc aggaacctct ggcgagggt gaccgatac
780
ctgcgctgg gggacattga cgcagccacc gagcagaagc ggcacctgga ggagaagcaa
840
cgggtggagg aacggaagcg cgagaacctc cgcacaccat ggaagccaa atattttctc
900
caggagggcg atggctgggt atacttcaat cccctctgga aagcacactg atggggtgga
960
ggtgcagagc tttccagtat agccctgttt ttgtaggaat attaaagtag tagagtatca
1020
gggttttgtt ggcattcact gagacctgt attagcatcc aagaaatgat gagagagaga
1080
gaaattatat actatgaaaa gtgcaccccc aactctgct agaggaatga atttattcaa
1140
gagccattcg gggcacgtgt gtgtacacac cgtatacgtt cacacacatg cactatgtaa
1200
acatctgagt atgattacac atttaaatac tgcactcacc aagggttaaag tgggtaatca
1260
taagtcctt tttatcaatg aagtttgaag ttttcttatt tttcactttg caaaaaatgt
1320
tttactca caaagatatt ctcacttagt caactcctgt caaatgaag gtgaactggc
1380
atggcccgat cactgtccat aaggagaaa gtggctcatt cctggtagaa gtatgggtgg
1440
ttatcatttc aaaattattg tgattctcac ctccctcccc acctcagtgt tttgtctgtc
1500
cgcgcccaag aaagataagc aagtatttcc tgctggatgg gggttggcag gaagctgtta
1560
aagatttatg ccagagcct tgc
1583

<210> 5990
 <211> 260
 <212> PRT
 <213> Homo sapiens

<400> 5990
 Leu Asn Ala Gln Pro Gly Thr Arg Arg Leu Trp Pro Ala Glu Ile Arg
 1 5 10 15
 Pro Pro Pro Arg Arg Leu Gly Lys Gly Gly Gln Gln Val Ser His His
 20 25 30
 Pro Pro Ile Ser Cys Phe Tyr Cys Glu Cys Glu Glu Lys Arg Leu Cys
 35 40 45
 Val Asn Thr His Val Trp Thr Lys Ser Lys Phe Met Gly Met Ser Val
 50 55 60
 Gly Val Ser Met Ile Gly Glu Gly Val Leu Arg Leu Leu Glu His Gly
 65 70 75 80
 Glu Glu Tyr Val Phe Thr Leu Pro Ser Ala Tyr Ala Arg Ser Ile Leu
 85 90 95
 Thr Ile Pro Trp Val Glu Leu Gly Gly Lys Val Ser Ile Asn Cys Ala
 100 105 110
 Lys Thr Gly Tyr Ser Ala Thr Val Ile Phe His Thr Lys Pro Phe Tyr
 115 120 125
 Gly Gly Lys Val His Arg Val Thr Ala Glu Val Lys His Asn Pro Thr
 130 135 140
 Asn Thr Ile Val Cys Lys Ala His Gly Glu Trp Asn Gly Thr Leu Glu
 145 150 155 160
 Phe Thr Tyr Asn Asn Gly Glu Thr Lys Val Ile Asp Thr Thr Thr Leu
 165 170 175
 Pro Val Tyr Pro Lys Lys Ile Arg Pro Leu Glu Lys Gln Gly Pro Met
 180 185 190
 Glu Ser Arg Asn Leu Trp Arg Glu Val Thr Arg Tyr Leu Arg Leu Gly
 195 200 205
 Asp Ile Asp Ala Ala Thr Glu Gln Lys Arg His Leu Glu Glu Lys Gln
 210 215 220
 Arg Val Glu Glu Arg Lys Arg Glu Asn Leu Arg Thr Pro Trp Lys Pro
 225 230 235 240
 Lys Tyr Phe Ile Gln Glu Gly Asp Gly Trp Val Tyr Phe Asn Pro Leu
 245 250 255
 Trp Lys Ala His
 260

<210> 5991
 <211> 2440
 <212> DNA
 <213> Homo sapiens

<400> 5991
 gccctgcacg aaaatcccg cacaattatt gccacgcccg gacggttggt gcatgtggct
 60
 gtggaaatga gcctgaagct gcagagtgtg gaatacgtgg tgttcgatga agctgaccgg
 120
 ctttttgaaa tgggttttcgc agagcagctg caggagatca tcgcccgcct ccccgggggc
 180

caccagacgg tgctgtttctc cgccacgctg cccaaactgc tgggtggaatt tgccccgggct
240
ggcctcacgg agcccgctgct catccggctt gacgtggata ccaagctcaa cgagcagctg
300
aagacctcct tcttcctcgt gcgggaggac accaaggctg ccgtgctgct ccacctgctg
360
cacaacgtgg tgcgggcccca ggaccagacc gtggtgtttg tggccacgaa gcaccacgcc
420
gagtacctca ctgagctgct gacgaccag ncggtgagct gcgcccacat ctatagtgcc
480
ctagaccga cagcccgcaa gatcaatctc gccaaattca cgcttgga gctgtccact
540
ctcattgtga ctgacctggc cgcccgaggc ctggacatcc cgctgctgga caatgtcatc
600
aactacagct tccccgcaa gggcaaactc ttctgcacc gcgtgggccc tgtggctcgg
660
gctggccgaa gtggcacagc ctactccttg gtggccctg atgaaatccc ctacctgctg
720
gatctgcacc tgttcctggg ccgctccctc nacctcgcc cgacctca aggagccctc
780
aggtgtggcc ggtgtggatg gcatgtggg tcgggtgcca cagagtgtgg tggacgagga
840
ggacagtgg ctgcagagca ccctggaggc atcgctggag ctacggggcc tggcccgct
900
tgctgataac gccagcagc agtatgtgcg ctacgcccgc gcgcccctgc ctgagtcct
960
caagagggcc aaggagatgg acctgtggg gctgggccc caccctct tcagctcgcg
1020
ttttgaggag gaggagctgc agcggctgag gctgggtggac agcataaaga actaccgctc
1080
ccgggagact atctttgaga tcaacgcctc cagccgagac ctgtgcagcc aggtgatgcg
1140
cgccaagcgg cagaaggacc gcaagccatc gcccgcttcc agcagggaca gcaggggcgg
1200
caggagcagc aggagggccc agtggggcca gcccagagcc gccagcact gcaggagaag
1260
cagcctgaga aggaggagga ggaggaggcg gsagagagtg tggaggacat tttctcagag
1320
gtcgtgggccc ggaagcggca gcggtcagga cccaacaggg gagccaagag gcggagggag
1380
gaggcccgcc agcgggacca ggaattctac atcccctacc ggccaagga ctttgacagc
1440
gagcggggcc tgagcatcag cggggaaggg ggagcctttg agcagcaggc agctggcgct
1500
gtcctggact tgatggggga tgaagcccag aacctgacga ggggccggca gcagctcaag
1560
tgggaccgta agaagaagcg gtttgtggga cagtcaggac aggaagacaa gaagaagatt
1620
aagacagaga gcggccgcta catcagcagc tcctacaagc gagacctcta tcagaagtgg
1680
aaacagaaac agaaaattga tgatcgtgac tcggacgaag aaggggcatc tgaccggcga
1740
ggcccagagc gaagaggtgg gaagcgagac cgtggccaag caggtgcac cggcccccac
1800

gccccaggca cccctgcagg ccgagtcgcg ccggaactca agaccaagca gcagatcctg
 1860
 aagcagcggc gccggggcca gaagctgcac ttcctgcagc gtgggtggct caagcagctc
 1920
 tctgcccgca accgcccgcg cgtccaggag ctgcagcagg gcgccttcgg ccgggggtgcc
 1980
 cgctccaaga agggcaagat gcggaagagg atgtgaggac caggacccag ccccggtggc
 2040
 ccttgattgg ccttaggggtg ggcacagca gacgttcccg tgcaccactg tgtgcctggc
 2100
 cctgtgctgg gcactggggg cactccctgc aggagccatc atctgtgaaa aggagcactg
 2160
 tatggccaca gaagggcagc agctgcgtca gcctaagaca gagacatttg aacagggcct
 2220
 tgaagggtgt gcaggagttc gccagcaaag ccaggcaggc caagacttga gttggcaact
 2280
 cagctgctgc tgcttccatg tgttctgggt tcagaggcca tggctgcacc ggtcagagcc
 2340
 ctgagtgctt cagggtttgg caatggaatt tttaatgtaa taaatcttta ttgagcactg
 2400
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2440

<210> 5992

<211> 301

<212> PRT

<213> Homo sapiens

<400> 5992

Ala	Leu	His	Glu	Asn	Pro	Asp	Ile	Ile	Ile	Ala	Thr	Pro	Gly	Arg	Leu
1				5					10					15	
Val	His	Val	Ala	Val	Glu	Met	Ser	Leu	Lys	Leu	Gln	Ser	Val	Glu	Tyr
			20					25					30		
Val	Val	Phe	Asp	Glu	Ala	Asp	Arg	Leu	Phe	Glu	Met	Gly	Phe	Ala	Glu
		35					40					45			
Gln	Leu	Gln	Glu	Ile	Ile	Ala	Arg	Leu	Pro	Gly	Gly	His	Gln	Thr	Val
	50					55				60					
Leu	Phe	Ser	Ala	Thr	Leu	Pro	Lys	Leu	Leu	Val	Glu	Phe	Ala	Arg	Ala
65				70					75					80	
Gly	Leu	Thr	Glu	Pro	Val	Leu	Ile	Arg	Leu	Asp	Val	Asp	Thr	Lys	Leu
			85					90					95		
Asn	Glu	Gln	Leu	Lys	Thr	Ser	Phe	Phe	Leu	Val	Arg	Glu	Asp	Thr	Lys
			100					105					110		
Ala	Ala	Val	Leu	Leu	His	Leu	Leu	His	Asn	Val	Val	Arg	Pro	Gln	Asp
		115				120						125			
Gln	Thr	Val	Val	Phe	Val	Ala	Thr	Lys	His	His	Ala	Glu	Tyr	Leu	Thr
	130					135					140				
Glu	Leu	Leu	Thr	Thr	Gln	Xaa	Val	Ser	Cys	Ala	His	Ile	Tyr	Ser	Ala
145					150					155				160	
Leu	Asp	Pro	Thr	Ala	Arg	Lys	Ile	Asn	Leu	Ala	Lys	Phe	Thr	Leu	Gly
			165					170					175		
Lys	Cys	Ser	Thr	Leu	Ile	Val	Thr	Asp	Leu	Ala	Ala	Arg	Gly	Leu	Asp
			180					185					190		
Ile	Pro	Leu	Leu	Asp	Asn	Val	Ile	Asn	Tyr	Ser	Phe	Pro	Ala	Lys	Gly

195	200	205
Lys Leu Phe Leu His Arg Val Gly Arg Val Ala Arg Ala Gly Arg Ser		
210	215	220
Gly Thr Ala Tyr Ser Leu Val Ala Pro Asp Glu Ile Pro Tyr Leu Leu		
225	230	235
Asp Leu His Leu Phe Leu Gly Arg Ser Leu Xaa Pro Arg Pro Thr Pro		
245	250	255
Gln Gly Ala Leu Arg Cys Gly Arg Cys Gly Trp His Ala Gly Ser Gly		
260	265	270
Ala Thr Glu Cys Gly Gly Arg Gly Gly Gln Trp Ser Ala Glu His Pro		
275	280	285
Gly Gly Ile Ala Gly Ala Thr Gly Pro Gly Pro Arg Cys		
290	295	300

<210> 5993
 <211> 7858
 <212> DNA
 <213> Homo sapiens

<400> 5993
 nccatggagg gcaaagattt caactatgag tacgtacaga gagaagctct caggggttccc
 60
 ctgatatttc gagaaaagga tggactggga attaagatgc ctgacctga tttcacagtc
 120
 cgagacgtca aactcctagt ggggagccgg cggcttgtgg acgtgatgga tgtgaacacc
 180
 cagaaaggca cggagatgag catgtcccag tttgtgcgtt actacgagac gcccagggcc
 240
 cagcgggaca agctgtacaa cgtcatcagc ctagagtcca gccacaccaa gctggagcac
 300
 ttggtcaagc gtccgactgt ggtagacctg gtggactggg tggacaacat gtggccccag
 360
 catctgaagg agaagcagac agaagccacg aacgccattg cagagatgaa gtacccgaaa
 420
 gtgaaaaagt actgtctgat gagcgtgaaa ggttgtttca ccgacttcca catcgacttt
 480
 ggaggcactt ccgttttgta ccatgttttc cggggtggga agattttttg gctgattcct
 540
 ccaacgtgc acaatttggc gctgtacgag gagtgggtgc tgtcaggcaa acagagtgc
 600
 atctttctgg gagaccgtgt ggaacgatgc caaagaattg agctgaagca gggctacaca
 660
 tttttcatcc ctccggttg gatccatgcc gtctacacc ctgtagactc tttggtgttc
 720
 ggcggaaca tcctgcacag ctttaacgtg cccatgcagc tgcggatcta cgagatcgag
 780
 gacaggacgc ggggtgcagc caaattccgt tacccttct actatgagat gtgctggtat
 840
 gtcttgaga gatacgtgta ctgtgtgacc cagcgtccc acctcaactca ggaataccag
 900
 agggagtga tgcttattga tgccccgagg aagcccagca tagacggctt ctcttcggat
 960
 tcctggctgg agatggagga ggaggcctgt gatcagcagc ctcaggagga ggaggagaag
 1020

gacgaggagg gcgagggcag ggacagggca cccaaaccgc ccaccgatgg ctccacttca
1080
cccaccagca cgccctctga ggaccaggag gccctcggga agaagcccaa agcacctgcc
1140
ctgcgattcc tcaaaaggac tttgtctaata gagtcggagg aaagtgtgaa gtccaccaca
1200
ttggccgtag actaccccaa gacccccacc ggctctcccc ccacggaggt ctctgccaaa
1260
tggaccatc tcaactgagtt tgaactgaag ggctgaaag ctctgggtgga gaaactggaa
1320
tccctccccg agaacaagaa gtgtgtcccc gagggcatcg aggaccccca ggcaactctg
1380
gagggtgtga agaacgtcct gaaggagcac gcagatgatg accctagtct ggccatcact
1440
ggggtccctg tggtgacttg gccaaagaag actccaaaga accgggctgt gggtcggccc
1500
aaggggaagc tgggcccggc ctccgcggtg aagttggccg ccaaccggac aacggcagga
1560
gctcggcggc gccggacgag atgccgcaag tgcgaggcct gcctgcggac cgagtgcgga
1620
gagtgccact tctgcaagga catgaagaag ttcgggggcc ccgggcgcat gaagcagagc
1680
tgcacatgc ggcagtgcac cgcgccagtg ctgccccaca ccgccgtgtg ccttgtgtgt
1740
ggcgaggcgg ggaaggaaga cacgggtgga gaggaggaag gcaagtttaa cctcatgtc
1800
atggagtgt ccatctgcaa tgaatcatc caccctggat gccttaagggt gagtgccca
1860
gtggggacag gtggtgctga cgctctgggg caggtagggt tgctggagat gctggtgaga
1920
tgggtgggatg caggtcgtgc agtgaattcc tggaggaccc ctgagtctgg gtgatcctgt
1980
gtgtcaaggg ataagcccg ggcaaggagg gcctggagta cctcagagac ccagtgtcat
2040
caaaggaata aacacacccc cacctcccag gatgtcagaa ccagagaggg tttccagagc
2100
ctcagcggat ggcaaacaca ggctgcttgt ttgtagctgg gccagagga gggcctccag
2160
gtggctccag gcttctggga gaacaaggcc ccacaccaca cttcttcccc cagcaccag
2220
tagagtcctc tgcagagtcc tttctgcatg ccaggcgctg agctgggtggc tttacctggg
2280
tcatacccc ccagtgagat gggcacacta acttttatgg ccgagggcac cagccacag
2340
agacggagtg tcttgcacag ggtcccagag aagcaaagg gctcagcctc tgaaccctgg
2400
cctggatcca cagctgcccg tctctgccag cctctgcagc tgtgttttct tttggtgga
2460
aacgggatag atgtgacgtt ggggaggggg tgctgctgct tctggaagac gtggcgtcac
2520
agagccttgt gcccgaggc catcttctcc gcccgccct cttctgagtc ctggtgttcc
2580
ccgcagatta aggagtcaga ggggtgtggtc aacgacgagc ttccaaactg ctgggagtgt
2640

ccgaagtgtgta accacgccgg caagaccggg aaacaaaagc gtggccctgg ctttaagtac
2700
gcctccaacc tgcccggtc cctgctcaag gagcagaaga tgaaccggga caacaaggaa
2760
gggcaggaaac ctgccaaagc gaggagtgaag tgtgaggagg cggcccggcg caggtcggat
2820
gagcactcga agaagggtgcc gccggacggc cttctgcga gaaagtctga cgacgtgcac
2880
ctgaggaaga agcggaaata tgagaagccc caggagctga gtggacgcaa gcgggcctca
2940
tcgcttcaaa cgtcccccgg ttctctctct cacctctcgc cgaggccccc tctaggcagc
3000
agcctcagcc cctggtggag atccagtctc acttacttcc agcagcaggc gctccacga
3060
cgacgccct cctgaggccc cggggactgg cgagtctcgg gctgtccccc accccacccc
3120
gctggtctct cccccactg ctgcctctcc tgaggcttcc caggtctcgg cccagatct
3180
ctggctcgtg gttctggctt ggggcctggg aagctgtctg tgctagagc ctctgttggt
3240
tgggatggaa gctgtgagtc cagggaacct ctgaggagcc tgggtggccct gctccacca
3300
cgggcctgtc tgtcaccagc cacaagggtg cggcaggagt ctctccagc tctagccatt
3360
cctgctgggc cggggattcc cacagggtg tgctccagaa ctggctccca gagccgagga
3420
tgatttgaat gggcggctgc acatctccag gtctgtggg tgggaggtca gttgggtggg
3480
aacagttcaa ctgtactcct acttccagct tcttcttga aagctgcagg cagggtctgc
3540
ccgtctgtcg gtcagacgtg gagatggcat ttgtggggaa ggctccctc cagccctcc
3600
tctggagact gtggactcgt ggtgggggtg ggtgtcgagg agaccaaata ccacgagccc
3660
ggggagcaag ctctgcgtcc tttcttttct gtgacagctc aaacctggca aagaagataa
3720
gcttttcagg aaaaaggtac catcttcccc tccctctgt gcccaggcc tgagcggta
3780
gagctgcacc gcagctccct gggccacagt cccgtggcag gggggcggga ggccttgggc
3840
ggggcgagcc ctgagcccca gaggtgacg cgtctccgct ctgcctctca gcggcggtcc
3900
tggaagaacg ccgaggaccg catggcgctg gccacaagc ccctccggcg cttcaagcag
3960
gaacccgagg acgaactgcc cgaggcggcc cccaagacca gggagagcga tcaactccgc
4020
tccagctccc ccaccgagg acccagcacc gaaggggccc agggcccgga ggagaagaag
4080
aaggtgaaga tgcgcggaa gcggcggtt cccaacaagg agctgagcag ggagctgagc
4140
aaggagctca accacgagat ccagaggacg gagaacagcc tggccaacga gaaccagcag
4200
cccatcaagt cggagcctga gagcgagggc gaggagccca agcggccccc gggcatctgc
4260

gagcgtcccc accgcttcag caaggggctc aacggcaccc cccgggagct gcggcaccag
4320
ctggggccca gcctgcgcag cccgccccgt gtcattctcc ggccccacc ctccgtgtcc
4380
ccgcccgaagt gtatccagat ggagcgccat gtgatccggc cccccccat cagccccccg
4440
cctgactcgc tacccttgga cgatggggca gccacgtca tgcacaggga ggtgtggatg
4500
gccgtcttca gctacctcag ccaccaagac ctgtgtgtgt gcatgcgggt ctgcaggacc
4560
tggaaccgct ggtgtcgcga taagcggttg tggaccgcga ttgacctgaa ccaactgcaag
4620
tctatcacac ccctgatgct gagtggcatc atccggcgac agcccgtctc cctcgacctc
4680
agctggacca atatctccaa gaagcagctg agctggctca tcaaccggct gcctgggctc
4740
cgggactttg tgtgtcagg ctgctcatgg atcgcggtct cggccctttg cagctccagt
4800
tgtccgtcgc tccggaccct ggatgtccag tgggtggagg gactaaagga tgcccaaatg
4860
cgggatctcc tgtccccgcc cacagacaac aggccagggt agttgccagg ctgggggttt
4920
ctgtgggggt ggggtgagcg agctagactg ttggatctgc ttttaccctc agacccacgc
4980
tgttcccaaa aggacatagg gatgagtctc tgcctccatg ttctcagttt gcttcaggca
5040
cagaggggat ctgggaggag gcaggggctc ctgtgcacac gtgagactcg ctccctggggc
5100
tccgctgcg tctctctgct ttctgttga ctgctcatg gggctctgcg tgtgtctcac
5160
tgctttctta ttgactcgt catggggctc tgcgtgcac tcaactcttt tctgttgact
5220
tgccctcgt tggtttcaag cctccactgc catcgggatc agtgtggtg tgcaaaggct
5280
tccaggatgg caccctcccc tggactgggc tggactgcct aggtccgtgc ttctcgccaa
5340
gccatgggga tcggagatgc tgcgcagcct ctgcactggt tggctgatga ctactgggtg
5400
gaatgtgggc atagtgtttc taggtctttt agtttttcaa gagaatctga aaatctaagt
5460
tttgatgtgg agtctgattt ttcaactgtt gaattatgat tttgggagga agcagtttat
5520
aactaaatga aatctgagtg ttctgtctgg ctgggtgggc ttttagagtg tcatgtcagc
5580
atgaccaggc ctccctcggtc agattgacgg gttgccccct ccttctctgc ccaccaggtc
5640
agatggacaa tcggagcaag ctccggaaca tcgtggagct gcgcctggca ggcctggaca
5700
tcacagatgc ctccctgcgg ctcatcatcc gccacatgcc cctgctctcc aagctccacc
5760
tcagttactg taaccacgtc accgaccagt ctatcaacct gctcactgct gttggcacca
5820
ccacccgaga ctcccttaacc gagatcaacc tgtctgactg caataaggtc actgatcagt
5880

gcctgtcctt cttcaaacgc tgtggaaaca tctgtcatat tgacctgagg tactgcaagc
5940
aagtcaccaa ggaaggctgt gagcagttca tagccgagat gtctgtgagt gtccagtttg
6000
ggcaagtaga agaaaaactc ctgcaaaaac tgagttagtc caaggataag tatgtaaata
6060
cggggcgggc tctgggaggg gagagacttt acaaaaatga gggcttttat tttccatttg
6120
gaacgtggga caacagacca caacgcaatt ccattttgca agtctttcca agggagaagc
6180
tgttcaacca cccgtttggg ggatgagtga gccgacactt tcctttggtc tttctgaatc
6240tgctttctgg accattttcta aggcggcctt tacaagaaga cattcctgtc 6300
ggagaggagg gtggacttcg gagaaattct catactgaag catgagctta ggagtttctg
6360
ttagtggttag tgggtttttg gacacttcat tccttgcaac accgaggttt tgggtgttga
6420
cataaagtgg accacacacc acatctgctg ccgtcttgac actttttttt gtttggttgg
6480
ttttgttaca tcttacatta tgcagaacta tttttgtaca aattgtttaa aagtatttta
6540
tgcaaggttt gaatgcatac cagtgttttt attgttttga gattgccaat tttcctgatt
6600
tccttaaggt aggagagaat ttaacgtgta cttcatcgac acaaccatc taaaaatgtg
6660
cccagatcta acaaagtagg ctaagacctt ccacttaaaa gcatgtttaa ctggaagttg
6720
agagtctgct ttgtacctca agagttacat gagcatgttg tggataaatg taaattatag
6780
tcaaagtaag atactctgcc aagtttcttc tgtagagaat tcaacttttct caaattttta
6840
aatttcgact tcagcctttg cactcaggag gttctgctcc agcatgagct cttgtactta
6900
catagatcta atttatacag tgagtcaaga cgtagaataa atgctccac atagcctttc
6960
ttttgtttt gcttctctcc tctgaagtgt gagttgagtt ctcatctagg tttgtaacat
7020
ggctatttcc tagttgtaaa gttctgcatt tataagtgcc attgttgtaa ggtggtgttt
7080
cctagacctt ccctgatgag attttacctt tgttgaattt gtataaaciaa ttgtacaaaa
7140
aaaaaacaga ccacaacgca attccatttt gcaagtcttt ccaagggaga agctgttcaa
7200
ccaccggttt gggggatgag tgagccgaca ctttcctttg gtctttctga atcgtaactg
7260
cactgctttc tggaccattt ctaaggcggc ctttacaaga agacattcct gtcggagagg
7320
agggtggact tcggagaaat tctcatactg aagcatgagc ttaggagttt ctgttagtgg
7380
tagtggtgtt ttggacactt cattccttgc aacaccgagg ttttgggtgt tgacataaag
7440
tggaccacac accacatctg ctgccgtctt gacacttttt tttgtttggt tggttttgtt
7500
acattttaca ttatgcagaa ctatttttgt acaaatgtt taaaagttat ttatgcaagg
7560

tttgaatgca taccagtgtt tttattgttt tgagattgcc aattttcctg atttccttaa
 7620
 ggtaggagag aatttaacgt gtacttcacg gacacaaccc atctacaaat gtgccagat
 7680
 ctaacaaagt aggctaagac cttccactta aaagcatgtt taactggaag ttgagagtct
 7740
 gctttgtacc tcaagagtta catgagcatg ttgtggataa atgtaaatta tagtcaaagt
 7800
 aagatactct gccaaagtttc ctctgtagag aattcacttt tctcaaattt taaaattt
 7858

<210> 5994

<211> 402

<212> PRT

<213> Homo sapiens

<400> 5994

Met	Ala	Leu	Ala	Asn	Lys	Pro	Leu	Arg	Arg	Phe	Lys	Gln	Glu	Pro	Glu
1				5					10					15	
Asp	Glu	Leu	Pro	Glu	Ala	Pro	Pro	Lys	Thr	Arg	Glu	Ser	Asp	His	Ser
			20					25					30		
Arg	Ser	Ser	Ser	Pro	Thr	Ala	Gly	Pro	Ser	Thr	Glu	Gly	Ala	Glu	Gly
		35					40					45			
Pro	Glu	Glu	Lys	Lys	Lys	Val	Lys	Met	Arg	Arg	Lys	Arg	Arg	Leu	Pro
	50					55					60				
Asn	Lys	Glu	Leu	Ser	Arg	Glu	Leu	Ser	Lys	Glu	Leu	Asn	His	Glu	Ile
65				70					75					80	
Gln	Arg	Thr	Glu	Asn	Ser	Leu	Ala	Asn	Glu	Asn	Gln	Gln	Pro	Ile	Lys
			85					90					95		
Ser	Glu	Pro	Glu	Ser	Glu	Gly	Glu	Glu	Pro	Lys	Arg	Pro	Pro	Gly	Ile
			100					105					110		
Cys	Glu	Arg	Pro	His	Arg	Phe	Ser	Lys	Gly	Leu	Asn	Gly	Thr	Pro	Arg
		115				120					125				
Glu	Leu	Arg	His	Gln	Leu	Gly	Pro	Ser	Leu	Arg	Ser	Pro	Pro	Arg	Val
	130					135					140				
Ile	Ser	Arg	Pro	Pro	Pro	Ser	Val	Ser	Pro	Pro	Lys	Cys	Ile	Gln	Met
145				150					155					160	
Glu	Arg	His	Val	Ile	Arg	Pro	Pro	Pro	Ile	Ser	Pro	Pro	Pro	Asp	Ser
			165					170					175		
Leu	Pro	Leu	Asp	Asp	Gly	Ala	Ala	His	Val	Met	His	Arg	Glu	Val	Trp
		180						185					190		
Met	Ala	Val	Phe	Ser	Tyr	Leu	Ser	His	Gln	Asp	Leu	Cys	Val	Cys	Met
	195					200					205				
Arg	Val	Cys	Arg	Thr	Trp	Asn	Arg	Trp	Cys	Cys	Asp	Lys	Arg	Leu	Trp
	210					215					220				
Thr	Arg	Ile	Asp	Leu	Asn	His	Cys	Lys	Ser	Ile	Thr	Pro	Leu	Met	Leu
225				230					235					240	
Ser	Gly	Ile	Ile	Arg	Arg	Gln	Pro	Val	Ser	Leu	Asp	Leu	Ser	Trp	Thr
			245					250					255		
Asn	Ile	Ser	Lys	Lys	Gln	Leu	Ser	Trp	Leu	Ile	Asn	Arg	Leu	Pro	Gly
	260							265					270		
Leu	Arg	Asp	Leu	Val	Leu	Ser	Gly	Cys	Ser	Trp	Ile	Ala	Val	Ser	Ala
	275					280					285				
Leu	Cys	Ser	Ser	Ser	Cys	Pro	Leu	Leu	Arg	Thr	Leu	Asp	Val	Gln	Trp

```

      290              295              300
Val Glu Gly Leu Lys Asp Ala Gln Met Arg Asp Leu Leu Ser Pro Pro
305              310              315              320
Thr Asp Asn Arg Pro Gly Glu Leu Pro Gly Trp Gly Phe Leu Trp Gly
      325              330              335
Trp Gly Glu Arg Ala Arg Leu Leu Asp Leu Leu Leu Pro Ser Asp Pro
      340              345              350
Ser Cys Ser Pro Lys Asp Ile Gly Met Ser Leu Cys Cys His Val Leu
      355              360              365
Ser Leu Leu Gln Ala Gln Arg Gly Ser Gly Arg Arg Gln Gly Leu Leu
      370              375              380
Cys Thr Arg Glu Thr Arg Ser Trp Gly Ser Ala Cys Val Ser Leu Leu
385              390              395              400
Ser Cys

```

<210> 5995
 <211> 1528
 <212> DNA
 <213> Homo sapiens

```

<400> 5995
ntccggacga gtctaggcga gcagggtcatc gtccccccct cagaaatgga gaggtgtcct
60
gggtgcgcctt cagtctgtga cattcagttg aaccagggtg cgcttctga cttcactgtc
120
ctcagtgatg tgctgccaat gttcagcgtg gacttcagca agcaagtcag cagctcggca
180
gcgtgccata gcaggcagtt tgtaccttg gcgtctggcc aagcacaggt ggttctctcg
240
tggtgggaca ttgaaatgga cctgagggc aagatcaagt gcaccatggc ccccttctgg
300
gcacactcag acccagagga gatgcagtgg cgggaccact ggnatgcagt gtgtgtactt
360
cctgccacaa gaggagcctg tggtgcaggg ctccagcgtc tatctggtag cccaccacga
420
tgactactgc gtatggtaca gcctgcagag gaccagccct gaaaagaatg agagagtccg
480
ccagatgcgc ccggtgtgtg actgccaggc tcacctgtc tggaaccggc ctcggtttgg
540
agagatcaat gaccaggaca gaactgatcg atacgtccag gctctgagga ccgtgtgaa
600
gccagacagc gtgtgcctgt gtgtcagcga tggcagcctg ctctccgtgc tggcccatca
660
cctgggggtg gaggcaggtg ttacagtcga gagttcagca gcttctcaca aactgttgag
720
aaaaatcttc aaggctaacc acttggaaga taaaattcac atcatagaga aacggccgga
780
attattaaca aatgaggacc tacagggcag aaaggctctc ctctcctgg gcgagccgtt
840
cttcactacc agcctgtctc cgtggcgcaa cctctacttc tggtagctgc ggaccgtgt
900
ggaccagcac ctggggccag gtgccatggt gatgccccag gcagcctcgc tgcacgctgt
960

```

ggttggtggag ttcagggacc tgtggcggat ccggagcccc tgtggtgact gcgaaggctt
 1020
 cgacgtgcac atcatggacg acatgattaa gcgtgccctg gacttcaggg agagcaggga
 1080
 agctgagccc caccgcgtgt gggagtaccc atgccgcagc ctctccgagc cctggcagat
 1140
 cctgaccttt gacttccagc agccggtgcc cctgcagccc ctgtgtgccg agggcaccgt
 1200
 ggagetcaga aggcccgggc agagccacgc agcggtgcta tggatggagt accacctgac
 1260
 cccggagtgc acgtccagca ctggcctcct ggagcctgca gaccccgagg ggggctgctg
 1320
 ctggaacccc cactgcaagc aggcctgcta cttcttcagc cctgccccag atcccagagc
 1380
 actgctgggt ggcccacgga ctgtcagcta tgcagtggag tttcaccccg acacaggcga
 1440
 catcatcatg gagttcaggc atgcagatac cccagactga ccactcttga gcaataaagt
 1500
 ggcctgaggg ctgggaaaaa aaaaaaaaa
 1528

<210> 5996
 <211> 140
 <212> PRT
 <213> Homo sapiens

<400> 5996
 Xaa Arg Thr Ser Leu Gly Glu Gln Val Ile Val Pro Pro Ser Glu Met
 1 5 10 15
 Glu Arg Cys Pro Gly Ala Pro Ser Val Cys Asp Ile Gln Leu Asn Gln
 20 25 30
 Val Ser Pro Ala Asp Phe Thr Val Leu Ser Asp Val Leu Pro Met Phe
 35 40 45
 Ser Val Asp Phe Ser Lys Gln Val Ser Ser Ser Ala Ala Cys His Ser
 50 55 60
 Arg Gln Phe Val Pro Leu Ala Ser Gly Gln Ala Gln Val Val Leu Ser
 65 70 75 80
 Trp Trp Asp Ile Glu Met Asp Pro Glu Gly Lys Ile Lys Cys Thr Met
 85 90 95
 Ala Pro Phe Trp Ala His Ser Asp Pro Glu Glu Met Gln Trp Arg Asp
 100 105 110
 His Trp Xaa Ala Val Cys Val Leu Pro Ala Thr Arg Gly Ala Cys Gly
 115 120 125
 Ala Gly Leu Ser Ala Leu Ser Gly Ser Pro Pro Arg
 130 135 140

<210> 5997
 <211> 1759
 <212> DNA
 <213> Homo sapiens

<400> 5997
 tttttttttt tttttgtttt aacaaacatg tttattagaa aagtaaaaaa tattgcatag
 60

gtcttaatac ttgaacatca agtgatttca tgaacagtga gtatcttata ttcattgtaaa
120
cagttctaga tggaagaccc agatggcact cctcccgggg aggggttcca gccccaccc
180
tctcagcccc tcccctgcc gctcaactct gcagtacacg atgggggaag gcttaaacgc
240
agctgccagg tgtaattttt caagtgtcaa agatcccaag tgatecctga caccaccccc
300
ttctactct tacattcatg cgtctgtaag atagctgcct acaacaggtc agtagtgatg
360
ctccgatcag aaaaacaaga taaaaaaca acaacaaca cacttggtcc cttcagacca
420
gtaagataca caaacacct ccacgacctc cgacctcccc cctccctccg gctgctctga
480
ggagcacgtg cctcttctt caccctgggc cgggctgggg cgggagcagc ccagctgctc
540
tctggatgtc acaccactgt taactgtcag taacaaaaat aataaggta atgctacaca
600
cacatccagc tggaagcctt gttggccctt aagcctttgt ttcattgctac agtactgagg
660
ggtatgtgtc ccaatgcac agccaccgc acacaactca atgagcttcc tgggaacac
720
tattccccca cctccacctt aggtggctgc ctcagttttc caaccactgg aatcagtccc
780
tcagctcctg cctctagtct ccacccaaa agttcagtcg tctctgtctt ggagggcact
840
gtcggccccc tcaggttgaa gttcaacact cctcaatgag cagctgttcc gagctgtaca
900
gcttcttctt gatgactcgg aagccagtgc tcagcgtcag ggactggctg aagccagggg
960
ggaagggaga gttggcggag ctaaacagcc cctggatctt gggccagagt cgtgagtcca
1020
ggcgagcac gagggtcagc tggaagggtg gcaccaggtt ggggtcgagt gccagctggc
1080
ccacgtgtg gcagctcttg ccctgtccca cgcagacgtc cagcagcgcc ccccgagggc
1140
cgcacggctc gctgtaggcc aggcgcagta gttctttgcc cacttggtt accaaactggc
1200
taggcattcag caggcgcgca gggcgctcag agcccagccg cgcctgggccc aggcctctct
1260
gcagcagctg catcaggttg gcacacaagt gttcatctc agggtcactg agcagctcga
1320
agtcgggcaa cgacacccca tccaggtaag cgtgtgtctt ctcgggcccg aagccactgt
1380
tgctgtgtc cagggactcg cagtccgagc tctccaggct cgtggagcgg tcaaacccct
1440
cctcccgggt cgccgacccc caggctgagc gcggcgccg atctggggtg ggagttcggg
1500
gcaaggacga gggcgaagag gaggtggacg acgacgagaa gcggtcccaa aggcctaggca
1560
tggtgaggac agacgccagg gcgtttgctg atgaactcag agtgccggag cgtagaagcc
1620
gcagtagcgc ggtcagcgag aactgctaag acaagtgcgt cctgccgctt gaatgggtgt
1680

gcgaaccggt gccaaaccacc gagagccgcc cagaccggtc ccagggtccac gctcgcacct
 1740
 cccccccctt gccgaattc
 1759

<210> 5998
 <211> 72
 <212> PRT
 <213> Homo sapiens

<400> 5998
 Thr Ala Pro Gly Ser Trp Ala Arg Val Val Ser Pro Gly Ala Ala Arg
 1 5 10 15
 Gly Ser Ala Gly Arg Trp Ala Pro Gly Trp Gly Arg Val Pro Ala Gly
 20 25 30
 Pro Arg Cys Gly Ser Ser Cys Pro Ala Pro Arg Arg Arg Pro Ala Ala
 35 40 45
 Pro Pro Ala Gly Arg Thr Ala Arg Cys Arg Pro Gly Ala Val Val Leu
 50 55 60
 Cys Pro Pro Gly Leu Pro Thr Gly
 65 70

<210> 5999
 <211> 2759
 <212> DNA
 <213> Homo sapiens

<400> 5999
 ncggccggaa gtggcggcgg cggcgtcggc ggcggtcgtag ccgtagaggt gcacagagaa
 60
 cacccttagc atgaacagtg tgaggattcc accagctttt tcaccatgaa ggagacagac
 120
 cgggaggccg ttgcgacagc agtgcaaagg gttgctggga tgctccagcg cccggaccag
 180
 ctggacaagg tggagcagta tcgcaggaga gaagcgcgga agaaggcctc cgtggaggcc
 240
 agattgaagg ccgccatcca gtcacagttg gacggggtgc gcacaggcct cagccagctc
 300
 cacaacgccc tgaatgacgt caaagacatc cagcagtcgc tggcagacgt cagcaaggac
 360
 tggaggcaga gcatcaacac cattgagagc ctcaaggacg tcaaagacgc cgtggtgcag
 420
 cacagccagc tcgccgcagc cgtggagaac ctcaagaaca tcttctcagt gcctgagatt
 480
 gtgagggaga cccaggacct aattgaacaa ggggcactcc tgcaagccca ccggaagctg
 540
 atggacctgg agtgcctccg ggacgggctg atgtacgagc agtaccgcat ggacagtggg
 600
 aacacgcgtg acatgacct catccatggc tactttggca gcacgcaggg gctctctgat
 660
 gagctggcta agcagctgtg gatggtgctg cagaggtcac tggctactgt ccgccgtgac
 720
 ccacacctgc tggctcagtg tgtcaggatc attgaaaggg aagagaaaat tgacaggcgc
 780

atacttgacc ggaaaaagca aactggcttt gttcctcctg ggaggcccaa gaattggaag
840
gagaaaatgt tcaccatctt ggagaggact gtgaccacca gaattgaggg cacacaggca
900
gataccagag agtctgacaa gatgtggctt gtccgccacc tggaaattat aaggaagtac
960
gtcctggatg acctcattgt cgccaaaaac ctgatggttc agtgctttcc tccccactat
1020
gagatcttta agaacctcct gaacatgtac caccaagccc tggcacgcg gatgcaggac
1080
ctcgcatcgg aagacctgga agccaatgag atcgtgagcc tcttgacgtg ggtcttaaac
1140
acctacacaa gtactgagat gatgaggaac gtggagctgg ccccggaagt ggatgtcggc
1200
accttgagc cattgttttc tccacacgtg gtctctgagc tgettgcac gtacatgtcc
1260
acgttcactt caaacatcat cgctggctg cggaagcgc tggagacaga caagaaagac
1320
tgggtcaaag agacagagcc agaagccgac caggacgggt actaccagac cacactccct
1380
gccattgtct tccagatgtt tgaacagaat cttcaagttg ctgctcagat aagtgaagat
1440
ttgaaaacaa aggtactagt tttatgtctt cagcagatga attctttcct aagcagatat
1500
aaagatgaag cgcagctgta taaagaagag cacctgagga atcggcagca ccctcactgc
1560
tacgttcagt acatgatcgc catcatcaac aactgccaga ccttcaagga atccatagtc
1620
agtttaaaaa gaaagtatth aaagaatgaa gtggaagagg gtgtgtctcc gagccagccc
1680
agcatggacg ggattttaga cgccatcgcg aaggagggtc gcagcgggtt gctggaggag
1740
gtcttcctgg acctggagca acatctgaat gaattgatga cgaagaagtg gctattaggg
1800
tcaaacgctg tagacattat ctgtgtcacc gtggaagact atttcaacga ttttgccaaa
1860
attaaaaagc cgtataagaa gaggatgacg gccgagggcg accggcgcggt ggtgggtggag
1920
tacctgcggg cggtcatgca gaagcgcatt tccttccgga gcccgaggga gcgcaaggag
1980
ggtgccgaga agatgggttag ggaggcagag cagcggcgct tcctgttccg gaagctggcg
2040
tccggtttcg ggaagacgt ggacggatac tgcgacacca tcgtggctgt ggccgaagtg
2100
atcaagctga cagacccttc tctgctctac ctggaggtct ccaactctggt cagcaagtat
2160
ccagacatca gggatgacca catcgggtgc ctgctggctg tgcgtgggga cgccagccgt
2220
gacatgaagc agaccatcat ggagacctg gagcagggcc cagcacaggc cagccccagc
2280
tacgtgcccc tcttcaagga cattgtgggtg ccagcctga acgtggccaa gctgctcaag
2340
tagcctccgc cggcctgccc tgctgcccc tccacagcct cggctcctgc ctttagaaac
2400

gcgggacagc tgattgtctt ccttgccac acgtgtctct tttagctgca cggcctgtct
 2460
 ttaggtgccca gtgtgatgca cgggtgtgac gtcagtgag cgtcccgagg ccacgtgcgg
 2520
 agggccctca ctgtgtgtgc aaaggcctgt ggggtgcagg ctctgccgca cagcctctct
 2580
 tgggtgcttg tttgttcag tgggtgaaag tgtgtggggc acagaggacg tgcacctccc
 2640
 tgccctcttc ctccctgggc cttcacgca ccccatctgc ttaagtgtc ggaacccgt
 2700
 cacctaatta aagtttctcg gcttctcag agaaaaaaaa aaaaaaaaaa aaaaaaaaa
 2759

<210> 6000

<211> 757

<212> PRT

<213> Homo sapiens

<400> 6000

His	Glu	Gln	Cys	Glu	Asp	Ser	Thr	Ser	Phe	Phe	Thr	Met	Lys	Glu	Thr
1				5					10					15	
Asp	Arg	Glu	Ala	Val	Ala	Thr	Ala	Val	Gln	Arg	Val	Ala	Gly	Met	Leu
			20					25					30		
Gln	Arg	Pro	Asp	Gln	Leu	Asp	Lys	Val	Glu	Gln	Tyr	Arg	Arg	Arg	Glu
			35				40					45			
Ala	Arg	Lys	Lys	Ala	Ser	Val	Glu	Ala	Arg	Leu	Lys	Ala	Ala	Ile	Gln
			50			55					60				
Ser	Gln	Leu	Asp	Gly	Val	Arg	Thr	Gly	Leu	Ser	Gln	Leu	His	Asn	Ala
65					70					75				80	
Leu	Asn	Asp	Val	Lys	Asp	Ile	Gln	Gln	Ser	Leu	Ala	Asp	Val	Ser	Lys
			85					90					95		
Asp	Trp	Arg	Gln	Ser	Ile	Asn	Thr	Ile	Glu	Ser	Leu	Lys	Asp	Val	Lys
			100				105						110		
Asp	Ala	Val	Val	Gln	His	Ser	Gln	Leu	Ala	Ala	Ala	Val	Glu	Asn	Leu
			115				120						125		
Lys	Asn	Ile	Phe	Ser	Val	Pro	Glu	Ile	Val	Arg	Glu	Thr	Gln	Asp	Leu
			130			135					140				
Ile	Glu	Gln	Gly	Ala	Leu	Leu	Gln	Ala	His	Arg	Lys	Leu	Met	Asp	Leu
145					150					155				160	
Glu	Cys	Ser	Arg	Asp	Gly	Leu	Met	Tyr	Glu	Gln	Tyr	Arg	Met	Asp	Ser
				165				170					175		
Gly	Asn	Thr	Arg	Asp	Met	Thr	Leu	Ile	His	Gly	Tyr	Phe	Gly	Ser	Thr
			180				185						190		
Gln	Gly	Leu	Ser	Asp	Glu	Leu	Ala	Lys	Gln	Leu	Trp	Met	Val	Leu	Gln
			195				200					205			
Arg	Ser	Leu	Val	Thr	Val	Arg	Arg	Asp	Pro	Thr	Leu	Leu	Val	Ser	Val
			210			215						220			
Val	Arg	Ile	Ile	Glu	Arg	Glu	Glu	Lys	Ile	Asp	Arg	Arg	Ile	Leu	Asp
225					230					235				240	
Arg	Lys	Lys	Gln	Thr	Gly	Phe	Val	Pro	Pro	Gly	Arg	Pro	Lys	Asn	Trp
				245				250						255	
Lys	Glu	Lys	Met	Phe	Thr	Ile	Leu	Glu	Arg	Thr	Val	Thr	Thr	Arg	Ile
			260				265						270		
Glu	Gly	Thr	Gln	Ala	Asp	Thr	Arg	Glu	Ser	Asp	Lys	Met	Trp	Leu	Val

275	280	285
Arg His Leu Glu Ile Ile	Arg Lys Tyr Val Leu	Asp Asp Leu Ile Val
290	295	300
Ala Lys Asn Leu Met Val	Gln Cys Phe Pro Pro	His Tyr Glu Ile Phe
305	310	315
Lys Asn Leu Leu Asn Met	Tyr His Gln Ala Leu	Ser Thr Arg Met Gln
325	330	335
Asp Leu Ala Ser Glu Asp	Leu Glu Ala Asn Glu	Ile Val Ser Leu Leu
340	345	350
Thr Trp Val Leu Asn Thr	Tyr Thr Ser Thr Glu	Met Met Arg Asn Val
355	360	365
Glu Leu Ala Pro Glu Val	Asp Val Gly Thr Leu	Glu Pro Leu Leu Ser
370	375	380
Pro His Val Val Ser Glu	Leu Leu Asp Thr Tyr	Met Ser Thr Leu Thr
385	390	395
Ser Asn Ile Ile Ala Trp	Leu Arg Lys Ala Leu	Glu Thr Asp Lys Lys
405	410	415
Asp Trp Val Lys Glu Thr	Glu Pro Glu Ala Asp	Gln Asp Gly Tyr Tyr
420	425	430
Gln Thr Thr Leu Pro Ala	Ile Val Phe Gln Met	Phe Glu Gln Asn Leu
435	440	445
Gln Val Ala Ala Gln Ile	Ser Glu Asp Leu Lys	Thr Lys Val Leu Val
450	455	460
Leu Cys Leu Gln Gln Met	Asn Ser Phe Leu Ser	Arg Tyr Lys Asp Glu
465	470	475
Ala Gln Leu Tyr Lys Glu	Glu His Leu Arg Asn	Arg Gln His Pro His
485	490	495
Cys Tyr Val Gln Tyr Met	Ile Ala Ile Ile Asn	Asn Cys Gln Thr Phe
500	505	510
Lys Glu Ser Ile Val Ser	Leu Lys Arg Lys Tyr	Leu Lys Asn Glu Val
515	520	525
Glu Glu Gly Val Ser Pro	Ser Gln Pro Ser Met	Asp Gly Ile Leu Asp
530	535	540
Ala Ile Ala Lys Glu Gly	Cys Ser Gly Leu Leu	Glu Glu Val Phe Leu
545	550	555
Asp Leu Glu Gln His Leu	Asn Glu Leu Met Thr	Lys Lys Trp Leu Leu
565	570	575
Gly Ser Asn Ala Val Asp	Ile Ile Cys Val Thr	Val Glu Asp Tyr Phe
580	585	590
Asn Asp Phe Ala Lys Ile	Lys Lys Pro Tyr Lys	Lys Arg Met Thr Ala
595	600	605
Glu Ala His Arg Arg Val	Val Val Glu Tyr Leu	Arg Ala Val Met Gln
610	615	620
Lys Arg Ile Ser Phe Arg	Ser Pro Glu Glu Arg	Lys Glu Gly Ala Glu
625	630	635
Lys Met Val Arg Glu Ala	Glu Gln Arg Arg Phe	Leu Phe Arg Lys Leu
645	650	655
Ala Ser Gly Phe Gly Glu	Asp Val Asp Gly Tyr	Cys Asp Thr Ile Val
660	665	670
Ala Val Ala Glu Val Ile	Lys Leu Thr Asp Pro	Ser Leu Leu Tyr Leu
675	680	685
Glu Val Ser Thr Leu Val	Ser Lys Tyr Pro Asp	Ile Arg Asp Asp His
690	695	700
Ile Gly Ala Leu Leu Ala	Val Arg Gly Asp Ala	Ser Arg Asp Met Lys

705		710		715		720
Gln Thr Ile Met Glu Thr Leu Glu Gln Gly Pro Ala Gln Ala Ser Pro						
	725		730		735	
Ser Tyr Val Pro Leu Phe Lys Asp Ile Val Val Pro Ser Leu Asn Val						
	740		745		750	
Ala Lys Leu Leu Lys						
755						

<210> 6001
 <211> 2490
 <212> DNA
 <213> Homo sapiens

<400> 6001
 nggcgccttt cagctgaaaa acagctcgcg ctgcagcaag ctagctggga agctcccagt
 60
 tctaaagaga ggctgtttac cagaacagca taacaagggc aggtctgact gcaaggctgg
 120
 gactgggagg cagagccgcc gccaaagggg cctcgggtta acactggtcg ttcaatcacc
 180
 tgcaagacga aggaggcaag gatgctgttg gcctgggtac aagcattcct cgtcagcaac
 240
 atgctcctag cagaagccta tggatctgga ggetgtttct gggacaacgg ccacctgtac
 300
 cgggaggacc agaactcccc cgcgcggggc ctccgctgcc tcaactggct ggacgcgcag
 360
 agcgggctgg cctcggcccc cgtgtcgggg gccggcaatc acagttaactg ccgaaacccg
 420
 gacgaggacc ccgcggggcc ctggtgctac gtcagtggcg aggccggcgt ccttgagaaa
 480
 cggccttgcg aggacctgcg ctgtccagag accaactccc aggccctgcc agccttcacg
 540
 acagaaatcc aggaagcgtc tgaagggcca ggtgcagatg aggtgcaggt gttcgtctct
 600
 gccaacgccc tgcccgcctc gagtgaggcg gcagctgtgc agccagtgat tgggatcagc
 660
 cagcgggtgc ggatgaactc caaggagaaa aaggacctgg gaactctggg ctacgtgctg
 720
 ggcattacca tgatggtgat catcattgcc atcggagctg gcatcatctt gggctactcc
 780
 tacaagaggg ggaaggattt gaaagaacag catgatcaga aagtatgtga gagggagatg
 840
 cagcgaatca ctctgccctt gtctgccttc accaacccca cctgtgagat tgtggatgag
 900
 aagactgtcg tggccacac cagccagact ccagttgacc ctcaggaggg caccacccc
 960
 cttatgggac aggcggggac tcctggggcc tgagccccc cagtgggcag gagcccatgc
 1020
 agacactggt gcaggacagc ccacctcct acagctagga ggaactacca ctttgtgttc
 1080
 tgggttaaac cctaccactc ccccgctttt ttggcgaatc ctagtaagag tgacagaagc
 1140
 aggtggccct gtgggctgag ggtaaggctg ggtagggtcc taacagtgtc ccttgtccat
 1200

cccttgagc agattttgtc tgtggatgga gacagtggca gctcccacag tgatgctgct
 1260
 gctaagggct tccaaacatt gcctgcaccc ctggaactga accagggata gacggggagc
 1320
 tccccaggc tcctctgtgc ttactaaga tggcctcagt ctccactgtg ggcttgagt
 1380
 gcatacactg ttattcatgg ttaaggtaaa gcagggtcaag ggatggcatt gaaaaaatat
 1440
 atttagtttt taaaatattt gggatggaac tccctactga cctctgagaa ctggaaacga
 1500
 gttgtacag aagtcagaac tttgggttgg gaatgagatc taggttgtgg ctgctggtat
 1560
 gcttcagctt gctggcaatg atgtgccttg acaaccgtgg gccaggcctg ggcccaggga
 1620
 ctcttctgt ttcataagga aaggaagaat tgcactgagc attccactta ggaagaggat
 1680
 agagaaggat ctgctccgcc tttggccaca ggagcagagg cagacctggg atgccccagt
 1740
 ttctcttcag ggatggatag tgacctgtct tcattttgca caggtaagag agtagttagc
 1800
 taacctatgg gaattatact gtggggcctt gtgagctgct tctaaggagg taacctggaa
 1860
 actaagctca gaggcaaggt aataaagcac ttcagggcctt gctccccaag tgggcctgat
 1920
 ttagcagggtg gtctcgagg cgtccaggtc agcaccttcc tgtagggcac tggggctagg
 1980
 gtcacagccc ctaactcata aagcaatcaa agaaccatta gaaagggtc attaacctt
 2040
 ttggacacag gacccagag aggaaaaagt gacttgccca aggtcgtaag caagctactg
 2100
 gcatggcaag agcccagctt cctgacggag cgcaacattt ctccactgca ctgtgctage
 2160
 agctcagcag ggcctctaac ctgtgatgtc aactcaaga ggccttggca gctcctagcc
 2220
 atagagcttc cttccagaa ccctccact gcccaatgtg gagacagggg ttagtggggc
 2280
 ttctatgga gccatctgct ttggggacct agacctcagg tggctctctg gtgttagtga
 2340
 tgctggagaa gagaatatta ctggtttcta cttttctata aaggcatttc tctatatata
 2400
 tgttttatat acctcattct gacacctgca tatagtgtgg gaaattgctc tgcatttgac
 2460
 ttaattaaaa aaaaaaaaaa gactccaaaa
 2490

<210> 6002

<211> 263

<212> PRT

<213> Homo sapiens

<400> 6002

Met Leu Leu Ala Trp Val Gln Ala Phe Leu Val Ser Asn Met Leu Leu
 1 5 10 15
 Ala Glu Ala Tyr Gly Ser Gly Gly Cys Phe Trp Asp Asn Gly His Leu

20 25 30
 Tyr Arg Glu Asp Gln Thr Ser Pro Ala Pro Gly Leu Arg Cys Leu Asn
 35 40 45
 Trp Leu Asp Ala Gln Ser Gly Leu Ala Ser Ala Pro Val Ser Gly Ala
 50 55 60
 Gly Asn His Ser Tyr Cys Arg Asn Pro Asp Glu Asp Pro Ala Gly Pro
 65 70 75 80
 Trp Cys Tyr Val Ser Gly Glu Ala Gly Val Pro Glu Lys Arg Pro Cys
 85 90 95
 Glu Asp Leu Arg Cys Pro Glu Thr Thr Ser Gln Ala Leu Pro Ala Phe
 100 105 110
 Thr Thr Glu Ile Gln Glu Ala Ser Glu Gly Pro Gly Ala Asp Glu Val
 115 120 125
 Gln Val Phe Ala Pro Ala Asn Ala Leu Pro Ala Arg Ser Glu Ala Ala
 130 135 140
 Ala Val Gln Pro Val Ile Gly Ile Ser Gln Arg Val Arg Met Asn Ser
 145 150 155 160
 Lys Glu Lys Lys Asp Leu Gly Thr Leu Gly Tyr Val Leu Gly Ile Thr
 165 170 175
 Met Met Val Ile Ile Ala Ile Gly Ala Gly Ile Ile Leu Gly Tyr
 180 185 190
 Ser Tyr Lys Arg Gly Lys Asp Leu Lys Glu Gln His Asp Gln Lys Val
 195 200 205
 Cys Glu Arg Glu Met Gln Arg Ile Thr Leu Pro Leu Ser Ala Phe Thr
 210 215 220
 Asn Pro Thr Cys Glu Ile Val Asp Glu Lys Thr Val Val Val His Thr
 225 230 235 240
 Ser Gln Thr Pro Val Asp Pro Gln Glu Gly Thr Thr Pro Leu Met Gly
 245 250 255
 Gln Ala Gly Thr Pro Gly Ala
 260

<210> 6003
 <211> 3107
 <212> DNA
 <213> Homo sapiens

<400> 6003
 tttttttttt tttttttttt tttttttttt tttttttttt ttttttttca ctatagaaaa
 60
 ttgacttggt ttattaccgt cactatagaa acagcgacc tgcttcccta ggtggctccc
 120
 agcagcgtgg cccacgcttg gacacccac tcccagaaa tctggactga gacccagggc
 180
 ctctgtctgg cttctcagca acagctgtct ggagagcttc acgtgctgga gagctgttgc
 240
 tccgtcatcg ctcacagagg catgggcccg aatttcagcc cccctgtgect ctccgtccag
 300
 tggccagcaa tgggtgttcc agcgaagggc ctgcacaaac ctgtcagggga ctggtctggc
 360
 acgcagccag cgtgaaatcc tcagggttgg tctcttcaga tgtgggaggt gaccgcagcc
 420
 ctgctcacag agaggggtga aactggcgca ggtgtgggag cagcctccct tcggggtctc
 480

ctcgaagtac ccagggtctct ccccgagcgt gcccgcccc agccttctga acacctgcca
540
cgtggatcac aaccttgctg ctcttctcgt ctcaactaga agcaactgca gcatggccct
600
tcccgatttc cagggtgcatg tcgaaaagcg tgcagtggcc ttgtgacgtg gccgggcccc
660
tggcaaggaa gtcctggcgg gtatcagcct ctgcactgca ccctgggtgg actgagtcgg
720
ggccaggatt gtgtcagggg aggtggagga gacgcgggga cagccggttc acagcggcct
780
ggacggagca ctccggggcc agagctgttc tgagacttgg tgcagattca aagattttaa
840
aatgcctggg gctacataag gggcagcact tctcagacga gggcttctga aaggggcatt
900
ccttggcact gagatggaga cggcagtgc tttccacct ctccgtgagg ccttgtgtg
960
tgctcagcct tgggtgtcag agatgggcag aggggagga ggcctctgc cagacgggta
1020
tgtggggagc aggggtgtgg ccagggtccc cgctctgccc tctcgggatt gcagagctgg
1080
agctcctccc agcttctcat gtgagtctga gtcgtccaca gaagccactg agggcaccag
1140
gaatgagccc ctggtgcccc gctgccacct gcagggtgct ccgtgagctg ggctgggct
1200
cagtgtgcaa gaggcattct ctctcagctg accgtgggct cagatctgcc aacactccg
1260
agaacagggt agggggcagg ggctgcacga aggagatcct accctccag aggggtggg
1320
gcccagggcc cgggcctgca accctggcca cctgccgacc agcagtgcag ttgtgagcac
1380
gccacctgca gtgacacaca cagcccatgg gtctactca ggctccgtg gcctgacttg
1440
ggggctaagg ggagctcagg agaaacccaa agtccagcca gcagggtccc cccacagaca
1500
ccccctgcac acacaggcag gggggcctac tgtgtctcat gcatcatcac accggagggc
1560
aaactctgct tgggtgagcct ggccccagcc ggccctccat gaatggtgac cacaccagc
1620
tgggtggcgg tgtggccttg gggttctggt gggggccagg gatgcacaga gctgggttct
1680
tgggagacgg tgccaaggcc agctgtcccg aagggtggcc ctggcacaat gccaccaga
1740
cctgaggag ggactgagac cacctcaatg ctgncagttc ctggggtcac gcagagtcca
1800
cgtggggaaa ggggcagtgg accccatgct gtgcagggtg tggctttgcc angcagagg
1860
agcccgctg gccctgggcc cagggtccg ggccgtggca gagactgcgg tgggaatggc
1920
cctgcagagg ccccgcccc cttgtctctt gcattccagc cacctgccct ggcccagct
1980
ccaaaggaag ggggccaag ctctctgaat aaaaggtgca catgaggacc aaggaggcct
2040
gacactggga ggggacagct ccacctctc tccccggaca ccccaaaagg cggagacgtt
2100

cacaagctgt cctgtcggcg gctgctgttt gtggaggagt aaagcatcct agcgagactg
 2160
 caggctcggg gtacatctga ttactgaat tttaaagtct gggatgttag tggggaagag
 2220
 gcgaggtgag cattgcgtga cggcaggac taggcggggc ggggactgca cctggctagg
 2280
 cccccccacc ctgggcaact tgcccacgga ccccgaggca gtgagtagtg acaggaggta
 2340
 gcccggggtg agacctctca cagcaagaag atggtgtggt tgctggggcc tccctggaga
 2400
 gtgtcgtccc tgcggccctt ggaagtgtc cctcacgac ggaaggtttc ctgtcagtgc
 2460
 ggtccccggg cctgatagtg gcggtgggcg ggtggggtca cgtgtectca aggtcctgaa
 2520
 tgccagctc tgcccattc ctctgattcc cagtggctgc tagctggacc cagctggtgt
 2580
 cctgggcatg aaggcagggc caccgtcccc agcagggtgt gccctcctgg ccagctgagc
 2640
 atcctggcca ccatacagct ccagggtccc ctactgccc ttcctcttct tcagaagcct
 2700
 ttgcggacct gacctgggac agcttcccgc gattccccct ccgttctcta tcaacgtcca
 2760
 ggacccaagc tgcccgcctc aggcagccc ttgccacttg gggcccggtc ttcacacgtg
 2820
 ggagctgac cggggctcct cctgaacag tcctgggtct gacgtctca attatcaccc
 2880
 acggaccac acgacgccc gctctgggcg gggatggggc cggggtgtc gcggggctcc
 2940
 gccaggcgag gccccagcaa ccacccatc ttcttgctgt gagaggctc accccgggt
 3000
 acctcctgt actactcagt gccgtgggt ccgtgggcaa gttgccagg gtgggggtgc
 3060
 ctageccagt gcagtcctcg ccccgctag tcctcggcgt caccgct
 3107

<210> 6004

<211> 140

<212> PRT

<213> Homo sapiens

<400> 6004

Met	Val	Thr	Thr	Pro	Ser	Trp	Trp	Ala	Val	Trp	Pro	Trp	Val	Ser	Gly
1				5					10					15	
Gly	Ala	Thr	Gly	Cys	Thr	Glu	Leu	Gly	Ser	Trp	Glu	Thr	Val	Pro	Arg
			20					25					30		
Pro	Ala	Val	Pro	Lys	Val	Ala	Pro	Gly	Thr	Met	Pro	Thr	Arg	Pro	Glu
		35				40					45				
Gly	Gly	Thr	Glu	Thr	Thr	Ser	Met	Leu	Xaa	Val	Pro	Gly	Val	Thr	Gln
		50				55				60					
Ser	Pro	Arg	Gly	Glu	Arg	Gly	Ser	Gly	Pro	His	Ala	Val	Gln	Gly	Val
65					70				75				80		
Ala	Leu	Pro	Xaa	Arg	Gly	Ser	Pro	Arg	Gly	Pro	Gly	Pro	Arg	Ala	Pro
				85					90				95		
Gly	Arg	Gly	Arg	Asp	Cys	Gly	Gly	Asn	Gly	Pro	Ala	Glu	Ala	Pro	Ala

atcgtgtga tgtggaccca gtcacagga gcagagtgc ggggatggag gggcccagcc
 1320
 tggactgact gctacttctt gtctctgttt ccattatcac ccagagaggg acaagatagg
 1380
 acatggcctg gaccagggag gcaggcctcc cactcagagt ctgggtctca ctggcccaaa
 1440
 gtctcccacc cagaactctg gccaaaaatg gctctctagg tgggctgtgc aggcaaagca
 1500
 aagctcaggg ctggttccca gctggcctga gcagggggcc tgccaccaga cccaccacg
 1560
 ctctgacgag aggtttttcc acctccagca agtggtccca gcaaccagct ccattctggc
 1620
 tgcttgctt ccatttccgt gtagatggag atcactgtgt gtaataaacc acaagtgcgt
 1680
 gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaag
 1735

<210> 6006

<211> 200

<212> PRT

<213> Homo sapiens

<400> 6006

Glu Leu Gly Leu Pro Gly Ala Pro Gly Ile Asp Gly Glu Lys Gly Pro
 1 5 10 15
 Lys Gly Gln Lys Gly Asp Pro Gly Glu Pro Gly Pro Ala Gly Leu Lys
 20 25 30
 Gly Glu Ala Gly Glu Met Gly Leu Ser Gly Leu Pro Gly Ala Asp Gly
 35 40 45
 Leu Lys Gly Glu Lys Gly Glu Ser Ala Ser Gln Pro Thr Gly Glu Pro
 50 55 60
 Gly Ser Ala His Ser Glu Pro Gly Pro Gly Pro Gly Pro Gly Pro
 65 70 75 80
 Gly Pro Met Gly Leu Gln Gly Ile Gln Gly Pro Lys Gly Leu Asp Gly
 85 90 95
 Ala Lys Gly Glu Lys Gly Ala Ser Gly Glu Arg Gly Ser Ser Gly Leu
 100 105 110
 Pro Gly Pro Val Gly Pro Pro Gly Leu Ile Gly Leu Pro Gly Thr Lys
 115 120 125
 Gly Glu Lys Gly Arg Pro Gly Glu Pro Gly Leu Asp Gly Phe Pro Gly
 130 135 140
 Pro Arg Gly Glu Lys Gly Asp Arg Ser Glu Arg Gly Glu Lys Gly Glu
 145 150 155 160
 Arg Gly Val Pro Gly Arg Lys Gly Val Lys Gly Gln Lys Gly Glu Pro
 165 170 175
 Gly Pro Pro Gly Leu Asp Gln Pro Cys Pro Val Gly Pro Asp Gly Leu
 180 185 190
 Pro Val Pro Gly Cys Trp His Lys
 195 200

<210> 6007

<211> 693

<212> DNA

<213> Homo sapiens

<400> 6007

cagcccccta agccatctcc ctccagtgc aacctctatt cagccttcac cagtgatggt
 60
 gccatttcag taccaagcct ttctgctcca ggtcaagga agatggtgaa aaaagtctgt
 120
 ccttgcaacc agctctgtag aaccagcagc acaaactctg ttggggcaac agtgaacagc
 180
 caagccgccc aagctcagcc tcctgccatg acgtccagca ggaagggcac attcacagat
 240
 gacttgcaaca agttggtaga caattgggccc cgagatgccca tgaatctctc aggcaggaga
 300
 ggaagcaaaag ggcacatgaa ttatgagggc cctggaatgg caaggaagtt ctctgcacct
 360
 gggcaactgt gcattctccat gacctcgaac ctgggtggct ctgcccccat ctctgcagca
 420
 tcagctacct ctctaggtca cttcaccaag tctatgtgcc cccacagca gtatggcttt
 480
 ccagctaccc catttggggc tcaatggagt gggacgggtg gccagcacc acagccactt
 540
 ggccagttcc aacctgtggg aactgcctcc ttgcagaatt tcaacatcag caatttgacg
 600
 aaatccatca gcaaccccc aggtcccaac ctgcccagca cttagaccta gagacattaa
 660
 ctgaatagat ctgggggcag gagatggaat gct
 693

<210> 6008

<211> 214

<212> PRT

<213> Homo sapiens

<400> 6008

Gln Pro Leu Lys Pro Ser Pro Ser Ser Asp Asn Leu Tyr Ser Ala Phe
 1 5 10 15
 Thr Ser Asp Gly Ala Ile Ser Val Pro Ser Leu Ser Ala Pro Gly Gln
 20 25 30
 Gly Lys Met Val Lys Lys Val Cys Pro Cys Asn Gln Leu Cys Arg Thr
 35 40 45
 Ser Ser Thr Asn Thr Val Gly Ala Thr Val Asn Ser Gln Ala Ala Gln
 50 55 60
 Ala Gln Pro Pro Ala Met Thr Ser Ser Arg Lys Gly Thr Phe Thr Asp
 65 70 75 80
 Asp Leu His Lys Leu Val Asp Asn Trp Ala Arg Asp Ala Met Asn Leu
 85 90 95
 Ser Gly Arg Arg Gly Ser Lys Gly His Met Asn Tyr Glu Gly Pro Gly
 100 105 110
 Met Ala Arg Lys Phe Ser Ala Pro Gly Gln Leu Cys Ile Ser Met Thr
 115 120 125
 Ser Asn Leu Gly Gly Ser Ala Pro Ile Ser Ala Ala Ser Ala Thr Ser
 130 135 140
 Leu Gly His Phe Thr Lys Ser Met Cys Pro Pro Gln Gln Tyr Gly Phe
 145 150 155 160
 Pro Ala Thr Pro Phe Gly Ala Gln Trp Ser Gly Thr Gly Gly Pro Ala

165 170 175
 Pro Gln Pro Leu Gly Gln Phe Gln Pro Val Gly Thr Ala Ser Leu Gln
 180 185 190
 Asn Phe Asn Ile Ser Asn Leu Gln Lys Ser Ile Ser Asn Pro Pro Gly
 195 200 205
 Ser Asn Leu Arg Thr Thr
 210

<210> 6009
 <211> 1570
 <212> DNA
 <213> Homo sapiens

<400> 6009
 nnctgcacca tggcgccccg gcttgtcagc cgatgcgggg ctgtgcgtgc agctccccac
 60
 agcgccccgc tggctgtcct ggcgcagggtg gtccggcgct caacagacac cgtgtatgac
 120
 gtggtggtgt cgggtggagg cctggtgggc gctgccatgg cctgtgcctt gggatatgat
 180
 attcactttc atgacaagaa aatcctgttg ctggaagcag gtccaaagaa agtactggag
 240
 aaattgtcag aaacttacag caacaggggc agctccattt cccctggctc tgcaacgctt
 300
 ctcatgtatt ttggtgcctg ggaccatata tgcaacatga gatacagagc ctttcggcga
 360
 atgcaggtgt gggacgcctg ctccagggcc ctgataatgt ttgataagga taatttagat
 420
 gacatgggct atatcgtgga gaatgatgtc atcatgcatg ctctcactaa gcagttggag
 480
 gctgtgtctg accgagtgac ggttctctac aggagcaaag ccattcgcta tacttggcct
 540
 tgtccatttc ctatggccga ctccagccct tgggttcata ttaccctagg tgatggcagc
 600
 acctccaga ccaaattggt gataggtgca gatggtcaca actccggagt acggcaggct
 660
 gttggaatcc agaattgtgag ctggaactat gaccagtctg ctgttgtggc tactctgcat
 720
 ttatcagagg ccacagaaaa caacgtagcc tggcagagat ttcttccttc tgggcctatt
 780
 gctctgctcc cgctctcaga caccttgagt tccttggttt ggtccacgtc ccatgaacat
 840
 gcagcagagc tagtttagcat ggatgaggaa aaatttgtgg atgccgttaa ctctgccttt
 900
 tggagtgatg ctgaccacac ggacttcata gacacagctg gtgccatgct gcagtatcct
 960
 gtcagccttc tgaagcccac taaggctctg gctcgccagc tgcccccaag cgtaccatgg
 1020
 gtggatgcca aaagccgagt tctgtttcct cttgggttgg gacatgctgc tgagtacgtc
 1080
 aggcctcggg tggcgctcat tggggatgca gcccacagag tccatccgct tgcaggacag
 1140
 ggtgtcaaca tgggccttgg ggatatctcc agcttggtccc atcacctcag tacggcagcc
 1200

ttcaatggga aggacttagg ttccgtgagc cacctcacag gttatgaaac agaaagacag
 1260
 cgtcacaaca ctgctcttct ggctgtctaca gacttactaa aaaggtctta ttctaccagt
 1320
 gcctccccgc ttgtgttgct caggacgtgg ggcttgccagg ccacaaatgc agtgtctcca
 1380
 ctcaaagaac agattatggc ctttgcaagc aaatgagtac tcctctccta aagaagatt
 1440
 acgttgatga aaaagaacat cctgcccagg acccatcata catattttca agatcttatt
 1500
 taatttaata aacttacttt acattaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 1560
 aaaaaaaaaa
 1570

<210> 6010
 <211> 468
 <212> PRT
 <213> Homo sapiens

<400> 6010
 Met Ala Ala Arg Leu Val Ser Arg Cys Gly Ala Val Arg Ala Ala Pro
 1 5 10 15
 His Ser Gly Pro Leu Ala Val Leu Ala Gln Val Val Arg Arg Ser Thr
 20 25 30
 Asp Thr Val Tyr Asp Val Val Val Ser Gly Gly Gly Leu Val Gly Ala
 35 40 45
 Ala Met Ala Cys Ala Leu Gly Tyr Asp Ile His Phe His Asp Lys Lys
 50 55 60
 Ile Leu Leu Leu Glu Ala Gly Pro Lys Lys Val Leu Glu Lys Leu Ser
 65 70 75 80
 Glu Thr Tyr Ser Asn Arg Val Ser Ser Ile Ser Pro Gly Ser Ala Thr
 85 90 95
 Leu Leu Ser Ser Phe Gly Ala Trp Asp His Ile Cys Asn Met Arg Tyr
 100 105 110
 Arg Ala Phe Arg Arg Met Gln Val Trp Asp Ala Cys Ser Glu Ala Leu
 115 120 125
 Ile Met Phe Asp Lys Asp Asn Leu Asp Asp Met Gly Tyr Ile Val Glu
 130 135 140
 Asn Asp Val Ile Met His Ala Leu Thr Lys Gln Leu Glu Ala Val Ser
 145 150 155 160
 Asp Arg Val Thr Val Leu Tyr Arg Ser Lys Ala Ile Arg Tyr Thr Trp
 165 170 175
 Pro Cys Pro Phe Pro Met Ala Asp Ser Ser Pro Trp Val His Ile Thr
 180 185 190
 Leu Gly Asp Gly Ser Thr Phe Gln Thr Lys Leu Leu Ile Gly Ala Asp
 195 200 205
 Gly His Asn Ser Gly Val Arg Gln Ala Val Gly Ile Gln Asn Val Ser
 210 215 220
 Trp Asn Tyr Asp Gln Ser Ala Val Val Ala Thr Leu His Leu Ser Glu
 225 230 235 240
 Ala Thr Glu Asn Asn Val Ala Trp Gln Arg Phe Leu Pro Ser Gly Pro
 245 250 255
 Ile Ala Leu Leu Pro Leu Ser Asp Thr Leu Ser Ser Leu Val Trp Ser

260 265 270
 Thr Ser His Glu His Ala Ala Glu Leu Val Ser Met Asp Glu Glu Lys
 275 280 285
 Phe Val Asp Ala Val Asn Ser Ala Phe Trp Ser Asp Ala Asp His Thr
 290 295 300
 Asp Phe Ile Asp Thr Ala Gly Ala Met Leu Gln Tyr Pro Val Ser Leu
 305 310 315 320
 Leu Lys Pro Thr Lys Val Ser Ala Arg Gln Leu Pro Pro Ser Val Pro
 325 330 335
 Trp Val Asp Ala Lys Ser Arg Val Leu Phe Pro Leu Gly Leu Gly His
 340 345 350
 Ala Ala Glu Tyr Val Arg Pro Arg Val Ala Leu Ile Gly Asp Ala Ala
 355 360 365
 His Arg Val His Pro Leu Ala Gly Gln Gly Val Asn Met Gly Phe Gly
 370 375 380
 Asp Ile Ser Ser Leu Ala His His Leu Ser Thr Ala Ala Phe Asn Gly
 385 390 395 400
 Lys Asp Leu Gly Ser Val Ser His Leu Thr Gly Tyr Glu Thr Glu Arg
 405 410 415
 Gln Arg His Asn Thr Ala Leu Leu Ala Ala Thr Asp Leu Leu Lys Arg
 420 425 430
 Leu Tyr Ser Thr Ser Ala Ser Pro Leu Val Leu Leu Arg Thr Trp Gly
 435 440 445
 Leu Gln Ala Thr Asn Ala Val Ser Pro Leu Lys Glu Gln Ile Met Ala
 450 455 460
 Phe Ala Ser Lys
 465

<210> 6011
 <211> 1331
 <212> DNA
 <213> Homo sapiens

<400> 6011
 ngcaggcccg cctaagccaa gggcaacctt ggcattgcagc ttgggttttc tgacttcacg
 60
 ggtgtgttca gcaaaggggt tcgggaagtg gagcgggttc tacagctgcc caaggaaccg
 120
 ggtgattctg cacagttcac caaagccatt gccatcatct tcccctttct gtatctgctg
 180
 gagaaggtgg agtgcacccc cagccaggag cacctgaagc accagaccgt ctaccgctg
 240
 ctcaagtgcg cgcccagggg caagaacggc ttcacccctc tgcacatggc tgtggacaag
 300
 gacaccacaa acgtggggcg ctatcccgtg ggcagattcc cctccctgca cgtgggtcaaa
 360
 gtgctgctcg actgcggggc cgacccggac agcagggtt ttgacaacaa caccctgcta
 420
 cacatagcag ccagaacaa ctgccggcc atcatgaatg cctgatcga agcagggggc
 480
 cacatggacg ccaccaatgc cttcaagaag acggcctacg agctgctgga cgagaagctg
 540
 ctggccaggg gtaccatgca gcccttcaac tacgtgaccc tgcagtgcct tgcggcccg
 600

gccctggata agaacaagat cccttacaag ggcttcatcc cggaagatct agaggcattc
 660
 atcgaactgc actgacctgc ccagaacatc tgcacctca cctctcccct ctctgctga
 720
 gatgggggaa atccggctgg ggtatagcag atgtcgttc ttgcctcctt caggcaccaa
 780
 tcaggagaag ggttctgcct cccatcccct ctacctgcag acagggtcgg aggtgttagc
 840
 gagcctttgg tgctagaagc ctgcggggc atgtgctaag aggacagtct ttctccggga
 900
 gcccgtcac tcattctgag ttaggaaaag acacaagacc tccccacat cctgtctgcc
 960
 tgggttaggg aggcctttgc cttgttacct agaggcggag ggactgaagc cattgcgttc
 1020
 cttccctgct agaaacacag gaagaagttg aggacggtct gccttccctc gtccctttac
 1080
 ctggccagat aactccagcc gctgaatata gtgttaggac tgggggctcc tgagatgaga
 1140
 gtttgagatt cagggaatga gaccacctct catttcttcc agcatgatcg cgctgttcc
 1200
 cgtgccaccg tagtccctgg caggcaggca gggctctgcc cagggcagcc tgccacttgc
 1260
 atagctttcg gttgggttgg tgttctgttt atttaataag tgggcaggtt gcaagcgttg
 1320
 cacagaaatt t
 1331

<210> 6012
 <211> 219
 <212> PRT
 <213> Homo sapiens

<400> 6012
 Ala Lys Gly Asn Leu Gly Met Gln Leu Gly Phe Ala Asp Phe Met Gly
 1 5 10 15
 Val Phe Ser Lys Gly Val Arg Glu Val Glu Arg Val Leu Gln Leu Pro
 20 25 30
 Lys Glu Pro Gly Asp Ser Ala Gln Phe Thr Lys Ala Ile Ala Ile Ile
 35 40 45
 Phe Pro Phe Leu Tyr Leu Leu Glu Lys Val Glu Cys Thr Pro Ser Gln
 50 55 60
 Glu His Leu Lys His Gln Thr Val Tyr Arg Leu Leu Lys Cys Ala Pro
 65 70 75 80
 Arg Gly Lys Asn Gly Phe Thr Pro Leu His Met Ala Val Asp Lys Asp
 85 90 95
 Thr Thr Asn Val Gly Arg Tyr Pro Val Gly Arg Phe Pro Ser Leu His
 100 105 110
 Val Val Lys Val Leu Leu Asp Cys Gly Ala Asp Pro Asp Ser Arg Asp
 115 120 125
 Phe Asp Asn Asn Thr Pro Leu His Ile Ala Ala Gln Asn Asn Cys Pro
 130 135 140
 Ala Ile Met Asn Ala Leu Ile Glu Ala Gly Ala His Met Asp Ala Thr
 145 150 155 160
 Asn Ala Phe Lys Lys Thr Ala Tyr Glu Leu Leu Asp Glu Lys Leu Leu

	165		170		175										
Ala	Arg	Gly	Thr	Met	Gln	Pro	Phe	Asn	Tyr	Val	Thr	Leu	Gln	Cys	Leu
	180				185							190			
Ala	Ala	Arg	Ala	Leu	Asp	Lys	Asn	Lys	Ile	Pro	Tyr	Lys	Gly	Phe	Ile
	195				200							205			
Pro	Glu	Asp	Leu	Glu	Ala	Phe	Ile	Glu	Leu	His					
	210				215										

<210> 6013
 <211> 2204
 <212> DNA
 <213> Homo sapiens

<400> 6013
 acgcgtgaag ggggcggagg tgggtggtgga ggtggcagtg tggctcctaa gccaccacgg
 60
 ggccggaaga agaagcggat gctggaatca gggtgcccg agatgaatga cccttatgtc
 120
 ctctcccttg aggatgatga tgaccatcag aaagacggcg agacctacag gtgccggatg
 180
 tgctcactga cattctactc caagtcggag atgcagatcc actccaagat gcacacggag
 240
 accatcaagc cccacaagtg cccacactgc tocaagacct tcgccaacag ctccctacctg
 300
 gccagcaca tccgtatcca ctccagggcc aagccctaca actgtaactt ttgtgagaaa
 360
 tcttccgctc agctctcaca cctccagcag cacacacgaa tccacactgg tgatagacca
 420
 tacaaatgtg cacacccagg ctgtgagaaa gccttcacac aactctccaa tctgcagtcc
 480
 cacagacggc aacacaacaa agataaaccc ttcaagtgcc acaactgtca tcgggcgtac
 540
 acggatgcag cctcactaga ggtgcacctg totacgcaca cagtgaagca tgccaagggtg
 600
 tacacctgca ctatctgcag tcgggcatac acatcagaaa cataccttat gaaacatatg
 660
 cgcaaacaca acccgctga tcttcagcaa cagggtcagg cagcagcagc agcggcagca
 720
 gtggcccagg cccaggtcca agctcaagcc caggctcagg ctccaggtca agcccaggcc
 780
 caggcccagg cctcccaggc atcacagcag cagcagcagc agcagcagca gcagcagcag
 840
 cagcaacagc caccaccaca cttccagtct cctggggcag cccccaggg tgggggtggt
 900
 ggggacagca atcccaaccc tccaccccag tgttcctttg acctgacccc gtataagacg
 960
 gcggagcatc ataaggacat ctgcctcact gtcaccacca gcaccatcca ggtggagcac
 1020
 ctggccagct cttagagatc cgtgtgtcca cccactggga agaggaagaa gtagtctctg
 1080
 tgtcttcttt ctccaactct tgggtgggaaa agtccttttc ttccttgaca ggccttggt
 1140
 ccatctcctt gggcctctgt caccgctttc cttcacagga taccatcctt tttctgaact
 1200

cttcttcaaa aggaacatca gccctcctga ttgcaaagga atactgagct gatgggtgtca
 1260
 tccagcagcc tccccctcca agcaaagctt ctaaaactgg gggtcgggtgc tcaaggggaag
 1320
 gatttgctat gacctcatag aaccttgtcc agtgtggcca cttaccttat ccttaccctc
 1380
 cttatcctca aagtttgggc tgatgtaaga ctagaggctg gccctcccag ataacagaga
 1440
 aaagggagcc ccaaatgcaa ccagcctctt gttctattct tgccctgcaaa agaacagagg
 1500
 tttctcaaat gcctcagtc ctagagagcca tttcttcccc tacatcgtct cactttgctt
 1560
 cctattgact gctggtagaa ggagatttgg ggtaggggct agacctcctt ttatttgaag
 1620
 ggggcaaggg ctgagatgtg gtccccaagg ggccagaaat tccaagttg gtcacagggtg
 1680
 gcttagaagt gtgtgttatg gttttacgga tttccttgaa gcctctctcc ttctctgctt
 1740
 acaaagaccc tatactctca gtctcccaa cccaccccca aggagctgtg ggaggctttg
 1800
 tggtatctgt gaaactccaa aacaggggtg ttgcggagaa gggagagttc aaggcaaacg
 1860
 caaggactgg acttagctcc ctaggtgcca cagtcagatg ccggacacgg atttatatat
 1920
 aaatatatat atataaatat attataccca ctcatcacgg ccatctttgt tgtaaccatt
 1980
 tctgtgttta taaatgcatt atctctgaga attttcatat ttgatgtttt gtttattttt
 2040
 gtcccttttt tccctctctc caccctgtc ctctagccac agcatttttc tttttgtctt
 2100
 tttttttttt ttttaaatca tggcagattt cagaggaaag gaaattaaaa aaaaaatcag
 2160
 gaaaccagtt gttataaagt aatttaaaaa tgaagaaaaa aaaa
 2204

<210> 6014

<211> 182

<212> PRT

<213> Homo sapiens

<400> 6014

Arg	Gln	His	Asn	Lys	Asp	Lys	Pro	Phe	Lys	Cys	His	Asn	Cys	His	Arg
1				5					10					15	
Ala	Tyr	Thr	Asp	Ala	Ala	Ser	Leu	Glu	Val	His	Leu	Ser	Thr	His	Thr
			20					25					30		
Val	Lys	His	Ala	Lys	Val	Tyr	Thr	Cys	Thr	Ile	Cys	Ser	Arg	Ala	Tyr
		35					40					45			
Thr	Ser	Glu	Thr	Tyr	Leu	Met	Lys	His	Met	Arg	Lys	His	Asn	Pro	Pro
		50				55				60					
Asp	Leu	Gln	Gln	Gln	Val	Gln	Ala	Ala	Ala	Ala	Ala	Ala	Ala	Val	Ala
65					70					75				80	
Gln	Ala	Gln	Ala	Gln	Ala	Gln	Ala	Gln	Ala	Gln	Ala	Gln	Ala	Gln	Ala
			85				90						95		
Gln	Ala	Gln	Ala	Gln	Ala	Ser	Gln	Ala	Ser	Gln	Gln	Gln	Gln	Gln	Gln

```

      100              105              110
Gln Gln Gln Gln Gln Gln Gln Gln Pro Pro Pro His Phe Gln Ser
      115              120              125
Pro Gly Ala Ala Pro Gln Gly Gly Gly Gly Gly Asp Ser Asn Pro Asn
      130              135              140
Pro Pro Pro Gln Cys Ser Phe Asp Leu Thr Pro Tyr Lys Thr Ala Glu
      145              150              155              160
His His Lys Asp Ile Cys Leu Thr Val Thr Thr Ser Thr Ile Gln Val
      165              170              175
Glu His Leu Ala Ser Ser
      180

```

<210> 6015
 <211> 612
 <212> DNA
 <213> Homo sapiens

```

<400> 6015
gccgagttag aacaagagta cagggaacttt acaattttta ttgattttta ctatatatac
60
tgcagtaatg attgaaatga atgacttttt tttaggaaaa tggttgtaaaa ggcaggcttc
120
tgagaatcct gattgaatgg aagtgaagag ccatgagaag ctgcgccagg agagtctaata
180
ttattctgat tacagctcat ggagagtgtg gggcatgtga ggccactcca gctattgtta
240
ttcaacttgc atctgcccct gctgatcccc tgagaggctg gcagcctctc agggctcctt
300
gggcgggtgag cctcctctcg cagcctgcaa gcctttttac ctctttccat cacctgagcc
360
tgaaagtgtg cctgcccgaac cttgctcttg gccttatttc tcttctctac ttatctccat
420
tccgcagggtg cctcagccat tgcctaccct tttgcacaaa attaaaaaga aaagaaaaaa
480
gccagtgaga gaacagtcac acgataaagg cacagcacag cagttggttg tctcttttta
540
aacaggaagt agcagtcatt ctatatggat gttcagctag acccacgggg cttaaacctt
600
acctggcatg gc
612

```

<210> 6016
 <211> 99
 <212> PRT
 <213> Homo sapiens

```

<400> 6016
Met Glu Arg Gly Lys Lys Ala Cys Arg Leu Arg Arg Arg Ala His Arg
1      5      10      15
Pro Arg Ser Pro Glu Arg Leu Pro Ala Ser Gln Gly Ile Ser Arg Gly
20     25     30
Arg Cys Lys Leu Asn Asn Asn Ser Trp Ser Gly Leu Thr Cys Pro Thr
35     40     45
Leu Ser Met Ser Cys Asn Gln Asn Lys Leu Asp Ser Pro Gly Arg Ala

```

50		55		60	
Ser	His	Gly	Ser	Ser	Leu
65		70		75	
Phe	Tyr	Asn	Ile	Phe	Leu
		85		90	
				95	

Gln Tyr Ile

<210> 6017

<211> 2091

<212> DNA

<213> Homo sapiens

<400> 6017

```

ccggccaagt ttaactttgc tagtgatgtg ttggatcact gggctgacat ggagaaggct
60
ggcaagcgac tcccaagccc agccctgtgg tgggtgaatg ggaaggggaa ggaattaatg
120
tggaatttca gagaactgag tgaaaacagc cagcaggcag ccaacgtcct ctcgggagcc
180
tgtggcctgc agcgtgggga tcgtgtggca gtgatgctgc cccgagtgcc tgagtgtgtg
240
ctggtgatcc tgggtgcat tcgagcaggt ctcacttcta tgccctggaac catccagatg
300
aaatccactg acatactgta taggttgacg atgtctaagg ccaaggctat tgttgctggg
360
gatgaagtca tccaagaagt ggacacagtg gcacttgaat gtccttctct gagaattaag
420
ctactggtgt ctgagaaaag ctgcgatggg tggctgaact tcaagaaact actaaatgag
480
gcattccacca ctcactactg tgtggagact ggaagccagg aagcatctgc catctacttc
540
actagtggga ccagtgggtc tcccaagatg gcagaacatt cctactcgag cctgggcctc
600
aaggccaaga tggatgctgg ttggacaggc ctgcaagcct ctgatataat gtggaccata
660
tcagacacag gttggatact gaacatcttg ggctcacttt tggaatcttg gacattagga
720
gcatgcacat ttgttcatct cttgccaaag tttgaccac tggttattct aaagacactc
780
tccagttatc caatcaagag tatgatgggt gccctattg tttaccggat gttgctacag
840
caggatcttt ccagttacaa gttcccccat ctacagaact gcctcgctgg aggggagtcc
900
cttcttccag aaactctgga gaactggagg gccagacag gactggacat ccgagaatc
960
tatggccaga cagaaacggg attaaacttg atggtttcca agacaatgaa aatcaaacca
1020
ggatacatgg gaacggctgc ttctgttat gatgtacagg ttatagatga taagggaac
1080
gtcctgcccc ccggcacaga aggagacatt ggcacaggg tcaaaccat caggcctata
1140
ggcatcttct ctggctatgt ggaaaatccc gacaagacag cagccaacat tcgaggagac
1200

```

ttttggctcc ttggagaccg gggaatcaaa gatgaagatg ggtatttcca gtttatggga
 1260
 cgggcagatg atatcattaa ctccagcggg taccggattg gaccctcgga ggtagagaat
 1320
 gcaactgatga agcaccctgc tgtggttgag acggctgtga tcagcagccc agaccccgtc
 1380
 cgaggagagg tggatgaaggc atttgtggtc ctggcctcgc agttcctgtc ccatgaccca
 1440
 gaacagctca ccaaggagct gcagcagcat gtgaagtcag tgacagcccc atacaagtac
 1500
 ccaagaaaga tagagtttgt cttgaacctg cccaagactg tcacagggaa aattcaacga
 1560
 gccaaacttc gagacaagga gtggaagatg tccggaaaag cccgtgcgca gtgagacatc
 1620
 taagagacat tcatttggat tcccccttc tttctcttcc ttttcccttt ggcccttgg
 1680
 ccttactatg atgatatgag attctttatg aaagaacatg aatgtaagtt ttgtcttgcc
 1740
 ctggttatta gccttggtta ttagcacaaa actttaccat gttagatggt gaaagaagaa
 1800
 aggggaaggaa tgagagagag tgaaaaggag agggtaacag aaaaaaagga aagaaaagta
 1860
 agtcagggaa atattaaaac tgcaaggaa agcaattgaa aaagaaataa agtagggaaa
 1920
 gaaggagaga ggaagcaagg gaaggaggaa gaaaggaaa agggagatgaa agggggagaa
 1980
 aagatagaag aaaaataatt gaaggagaa tcagaaaaat aaagagaaga aaggaaagaa
 2040
 ataaagagag aaagagaaag aagaaagagc aaaagaacac aagaaagaaa g
 2091

<210> 6018

<211> 537

<212> PRT

<213> Homo sapiens

<400> 6018

Pro Ala Lys Phe Asn Phe Ala Ser Asp Val Leu Asp His Trp Ala Asp
 1 5 10 15
 Met Glu Lys Ala Gly Lys Arg Leu Pro Ser Pro Ala Leu Trp Trp Val
 20 25 30
 Asn Gly Lys Gly Lys Glu Leu Met Trp Asn Phe Arg Glu Leu Ser Glu
 35 40 45
 Asn Ser Gln Gln Ala Ala Asn Val Leu Ser Gly Ala Cys Gly Leu Gln
 50 55 60
 Arg Gly Asp Arg Val Ala Val Met Leu Pro Arg Val Pro Glu Trp Trp
 65 70 75 80
 Leu Val Ile Leu Gly Cys Ile Arg Ala Gly Leu Ile Phe Met Pro Gly
 85 90 95
 Thr Ile Gln Met Lys Ser Thr Asp Ile Leu Tyr Arg Leu Gln Met Ser
 100 105 110
 Lys Ala Lys Ala Ile Val Ala Gly Asp Glu Val Ile Gln Glu Val Asp
 115 120 125
 Thr Val Ala Ser Glu Cys Pro Ser Leu Arg Ile Lys Leu Leu Val Ser

130		135		140	
Glu Lys Ser Cys Asp Gly Trp Leu Asn Phe Lys Lys Leu Leu Asn Glu					
145		150		155	160
Ala Ser Thr Thr His His Cys Val Glu Thr Gly Ser Gln Glu Ala Ser					
	165		170		175
Ala Ile Tyr Phe Thr Ser Gly Thr Ser Gly Leu Pro Lys Met Ala Glu					
	180		185		190
His Ser Tyr Ser Ser Leu Gly Leu Lys Ala Lys Met Asp Ala Gly Trp					
	195		200		205
Thr Gly Leu Gln Ala Ser Asp Ile Met Trp Thr Ile Ser Asp Thr Gly					
	210		215		220
Trp Ile Leu Asn Ile Leu Gly Ser Leu Leu Glu Ser Trp Thr Leu Gly					
	225		230		235
Ala Cys Thr Phe Val His Leu Leu Pro Lys Phe Asp Pro Leu Val Ile					
		245		250	255
Leu Lys Thr Leu Ser Ser Tyr Pro Ile Lys Ser Met Met Gly Ala Pro					
	260		265		270
Ile Val Tyr Arg Met Leu Leu Gln Gln Asp Leu Ser Ser Tyr Lys Phe					
	275		280		285
Pro His Leu Gln Asn Cys Leu Ala Gly Gly Glu Ser Leu Leu Pro Glu					
	290		295		300
Thr Leu Glu Asn Trp Arg Ala Gln Thr Gly Leu Asp Ile Arg Glu Phe					
	305		310		315
Tyr Gly Gln Thr Glu Thr Gly Leu Thr Cys Met Val Ser Lys Thr Met					
		325		330	335
Lys Ile Lys Pro Gly Tyr Met Gly Thr Ala Ala Ser Cys Tyr Asp Val					
	340		345		350
Gln Val Ile Asp Asp Lys Gly Asn Val Leu Pro Pro Gly Thr Glu Gly					
	355		360		365
Asp Ile Gly Ile Arg Val Lys Pro Ile Arg Pro Ile Gly Ile Phe Ser					
	370		375		380
Gly Tyr Val Glu Asn Pro Asp Lys Thr Ala Ala Asn Ile Arg Gly Asp					
	385		390		395
Phe Trp Leu Leu Gly Asp Arg Gly Ile Lys Asp Glu Asp Gly Tyr Phe					
		405		410	415
Gln Phe Met Gly Arg Ala Asp Asp Ile Ile Asn Ser Ser Gly Tyr Arg					
	420		425		430
Ile Gly Pro Ser Glu Val Glu Asn Ala Leu Met Lys His Pro Ala Val					
	435		440		445
Val Glu Thr Ala Val Ile Ser Ser Pro Asp Pro Val Arg Gly Glu Val					
	450		455		460
Val Lys Ala Phe Val Val Leu Ala Ser Gln Phe Leu Ser His Asp Pro					
	465		470		475
Glu Gln Leu Thr Lys Glu Leu Gln Gln His Val Lys Ser Val Thr Ala					
		485		490	495
Pro Tyr Lys Tyr Pro Arg Lys Ile Glu Phe Val Leu Asn Leu Pro Lys					
	500		505		510
Thr Val Thr Gly Lys Ile Gln Arg Ala Lys Leu Arg Asp Lys Glu Trp					
	515		520		525
Lys Met Ser Gly Lys Ala Arg Ala Gln					
	530		535		

<210> 6019

<211> 3002

<212> DNA

<213> Homo sapiens

<400> 6019

attccccctcc ttcattggctg catatctggc tagcgtgaag agatagtcac tgagtctgtt
60
taagaacttg gccacgttcg catcgggtctc tcccatctgg acaagaggca ccacacgtct
120
ctcggccccg cggcacacgg cccggcagaa atgcagcgcc gagctgatct tgccctccga
180
cgggcacgct gctccagagt gggcagggct gggagggacc ggtgaggacc tggagggact
240
tggggaactg gaggacacg cctgtcaagg caggatgaag gccgtgagtg gtgggagctg
300
gctgggtgtac ttgtcgatcc actgctccag ctccaggatg ggccccgcct tgaacgtggc
360
atactttaag tgagcctccc gggccgagga gcattggtgc gccagggccg agccgacgct
420
ctgcaatgtg cactggattt tctgaagctc ttcggcaaat gtatggccct tttctgtgac
480
taattccaga gcaaacccaa tagctgaact taattcatct gtagttccca cagccttctc
540
cgaagacacc caggatcccc aagatttaca ccaaaacggg agacaaaggg ttttctagta
600
ccttcacagg agaaaggaga cccaaagatg accaagtgtt tgaagccgtg ggaactacag
660
atgaattaag ttcagctatt gggtttctc tgggaattagt cacagaaaag ggccatacat
720
ttgccgaaga gcttcagaaa atccagtgc cattgcagga cgtcggctcg gccctggcga
780
caccatgtc ctcggccccg gaggtcact taaagtatac cactttcaag gcggggccca
840
tcctggagct ggagcagtgg atcgacaagt acaccagcca gctccacca ctacggcct
900
tcacctgcc ttcgggaggg aagatcagct cggcgctgca tttctgccg gccgtgtgcc
960
gccgggcca gagacgtgtg gtgcctcttg tccagatggg agagaccgat gcgaacgtgg
1020
ccaagtctt aaacagactc agtgactatc tcttcacgct agccagatat gcagccatga
1080
aggaggggaa tcaagagaaa atatacaaga aaaatgacct atcggccgag tctgagggac
1140
tctgaaatca cagaaagtgg gagcttgagg gatecctcca tggcgatggc cgtggagaga
1200
ggagcttgcc cttctggggg cctggttctc gaagagctca cccagagagg ctcaaagcag
1260
ccttttgtcc cagctcagct ttgatctaca cctcttgcca ccttctcaa gggactgtga
1320
ccctttgggg attctgtccc tgacctgct tccccagct ctcctgggtc ttggagggat
1380
gtgggaatga attggcattg caggaaagac aggtaaagtg attgctgcaa tgagaaggag
1440
ctgtgcgga aaggaataaa agttggaagc cccggaccac tggaaccttg aaccaccag
1500

ctggctgtac ccggagccgt ggcagcagcc ctcateccca tggcggccat ccagccctg
1560
gacccagagg ccgagcccag catggacgtg attttggtgg gatccagtga gctctcaagc
1620
tccgtttcac ccgggacagg cagagatctt attgcatatg aagtcaaggc taaccagcga
1680
aatatagaag acatctgcat ctgctgcgga agtctccagg ttcacacaca gcaccctctg
1740
tttgagggag ggatctgcgc cccatgtaag gacaagttcc tggatgccct ctctctgtac
1800
gacgatgacg ggtaccaatc ctactgctcc atctgctgct ccggagagac gctgctcatc
1860
tgcggaaacc ctgattgcac ccgatgctac tgcttcgagt gtgtggatag cctggteggc
1920
cccgggacct cggggaaggc gcacgccatg agcaactggg tgtgctacct gtgcctgccg
1980
tcctcccgaa gcgggctgct gcagcgtcgg aggaagtggc gcagccagct caaggccttc
2040
tacgaccgag agtcggagaa tccccttgag atgttcgaaa ccgtgcctgt gtggaggaga
2100
cagccagtcc ggggtgctgc cttttttgaa gacatcaaga aagagctgac gagtttgggc
2160
tttttgaaa gtggttctga cccgggacaa ctgaagcatg tggttgatgt cacagacaca
2220
gtgaggaagg atgtggagga gtggggaccc ttcgatcttg tgtacggcgc cacagctccc
2280
ctgggccaca cctgtgacgg tcctcccagc tggtagctgt tccagttcca ccggttctctg
2340
cagtacgcac ggcccaagcc aggcagcccc aggccttctt tctggatgtt cgtggacaat
2400
ctggtgctga acaaggaaga cctggacgtc gcatctcgct tcctggagat ggagccagtc
2460
accatcccag atgtccacgg cggatccttg cagaatgctg tccgcgtgtg gagcaacatc
2520
ccagccataa ggagcagcag gcactgggct ctgggttcgg aagaagaatt gtccctgctg
2580
gcccagaaca agcagagctc gaagctcgcg gccaaagtgg ccaccaagct ggtgaagaac
2640
tgctttctcc ccctaagaga atatttcaag tatttttcaa cagaactcac ttcctcttta
2700
taaatagtc actatactgt gaagaaaaag acttttccta gaacaaaggc aactttcctc
2760
acgttgctc tttctcttc ggattcttgt ttttttgcgt ctccgtcgtc actgcagacc
2820
cacgttccgt tgggttcttg agactcaggg tctctcccc atcacgtgg ctcagggac
2880
ggggcgaggc ccacgccgt gcacacagga ccacacgtgg tggtcgcga tgtacttctc
2940
gaaagcattt ctgtgttcta gttgagaagt tcgagtatat ttattataag atagttattg
3000
gt
3002
<210> 6020

<211> 387
 <212> PRT
 <213> Homo sapiens

<400> 6020

```

Met Ala Ala Ile Pro Ala Leu Asp Pro Glu Ala Glu Pro Ser Met Asp
 1           5           10           15
Val Ile Leu Val Gly Ser Ser Glu Leu Ser Ser Val Ser Pro Gly
 20           25           30
Thr Gly Arg Asp Leu Ile Ala Tyr Glu Val Lys Ala Asn Gln Arg Asn
 35           40           45
Ile Glu Asp Ile Cys Ile Cys Cys Gly Ser Leu Gln Val His Thr Gln
 50           55           60
His Pro Leu Phe Glu Gly Ile Cys Ala Pro Cys Lys Asp Lys Phe
65           70           75           80
Leu Asp Ala Leu Phe Leu Tyr Asp Asp Asp Gly Tyr Gln Ser Tyr Cys
 85           90           95
Ser Ile Cys Cys Ser Gly Glu Thr Leu Leu Ile Cys Gly Asn Pro Asp
100          105          110
Cys Thr Arg Cys Tyr Cys Phe Glu Cys Val Asp Ser Leu Val Gly Pro
115          120          125
Gly Thr Ser Gly Lys Val His Ala Met Ser Asn Trp Val Cys Tyr Leu
130          135          140
Cys Leu Pro Ser Ser Arg Ser Gly Leu Leu Gln Arg Arg Arg Lys Trp
145          150          155          160
Arg Ser Gln Leu Lys Ala Phe Tyr Asp Arg Glu Ser Glu Asn Pro Leu
165          170          175
Glu Met Phe Glu Thr Val Pro Val Trp Arg Arg Gln Pro Val Arg Val
180          185          190
Leu Ser Leu Phe Glu Asp Ile Lys Lys Glu Leu Thr Ser Leu Gly Phe
195          200          205
Leu Glu Ser Gly Ser Asp Pro Gly Gln Leu Lys His Val Val Asp Val
210          215          220
Thr Asp Thr Val Arg Lys Asp Val Glu Glu Trp Gly Pro Phe Asp Leu
225          230          235          240
Val Tyr Gly Ala Thr Ala Pro Leu Gly His Thr Cys Asp Arg Pro Pro
245          250          255
Ser Trp Tyr Leu Phe Gln Phe His Arg Phe Leu Gln Tyr Ala Arg Pro
260          265          270
Lys Pro Gly Ser Pro Arg Pro Phe Phe Trp Met Phe Val Asp Asn Leu
275          280          285
Val Leu Asn Lys Glu Asp Leu Asp Val Ala Ser Arg Phe Leu Glu Met
290          295          300
Glu Pro Val Thr Ile Pro Asp Val His Gly Gly Ser Leu Gln Asn Ala
305          310          315          320
Val Arg Val Trp Ser Asn Ile Pro Ala Ile Arg Ser Ser Arg His Trp
325          330          335
Ala Leu Val Ser Glu Glu Glu Leu Ser Leu Leu Ala Gln Asn Lys Gln
340          345          350
Ser Ser Lys Leu Ala Ala Lys Trp Pro Thr Lys Leu Val Lys Asn Cys
355          360          365
Phe Leu Pro Leu Arg Glu Tyr Phe Lys Tyr Phe Ser Thr Glu Leu Thr
370          375          380
Ser Ser Leu

```

385

<210> 6021

<211> 3145

<212> DNA

<213> Homo sapiens

<400> 6021

nactcttgag gacaaggacc ttctctggac acagatatgc ctcagagtaa ctgttgcata
60
gcattcagac actgctggtt gaattgtcca ttacttggc atgcaacaca tggcaaagta
120
aagggggaag gagattttct gctgcatgtg gctttaacca agagagcaga tccagctgag
180
cttagaacia tatttttgaa gtatgcaagc attgagaaaa acggtgaatt tttcatgtcc
240
cccaatgact ttgtcactcg atacttgaac atttttggag aaagccagcc taatccaaag
300
actgtggaac ttttaagtgg agtgggtggat cagaccaaag atggattaat atcttttcaa
360
gaatttggtt cctttgaatc tgtcctgtgt gccctgatg ctttgtttat ggtagccttt
420
cagctgtttg acaaagctgg caaaggagaa gtaacttttg aggatgttaa gcaagttttt
480
ggacagacca caattcatca acatattcca ttttaactggg attcagaatt tgtgcaacta
540
cattttggaa aagaagaaa aagacacctg acatatgctg aatttactca gtttttattg
600
gaaatacaac tggagcacgc aaagcaagcc tttgtgcaac gggacaatgc taggactggg
660
agagtcacag ccctcgactt ccgagacatc atggtcacca tccgccccca tgtcttgact
720
cctttttagt aagaatgtct agtagctgct gctggaggta ccacatccca tcaagttagt
780
ttctcctatt ttaatggatt taattcgctc cttacaaca tggaaactcat tagaaagatc
840
tatagcactc tggctggcac caggaaagat gttgaagtga ctaaggagga gtttggtctg
900
gcagctcaga aatttggtca ggttacaccc atggaagttg acatcttggt tcagtttagca
960
gatttatatg agccaagggg acgtatgacc ttagcagaca ttgaacggat tgctcctctg
1020
gaagaggga ctctgccctt taacttggct gaggccaga ggcagcagaa ggcctcaggt
1080
gattcagctc gaccagttct tctacaagt gacagatcgg cctacagggt tggctctgggt
1140
tctgttgctg gagctgttgg agccactgct gtgtatccta tcgatcttgt aaaaactcga
1200
atgcagaacc aacgatcaac tggctctttt gtgggagaac tcatgtataa aaacagcttt
1260
gactgtttta agaaagtgt acgtatgaa ggcttctttg gactgtatag aggtctgttg
1320
ccacagttat tgggagttgc ccagagaag gccataaaac ttacagtga cgattttgtg
1380

agggataaat ttatgcacaa agatgggttcg gtcccacttg cagcagaaat tcttgctgga
1440
ggctgcgctg gaggtccca ggtgattttc acaaaccctt tagaaatcgt caagatccgt
1500
ttgcaagtgg caggagaaat caccactggg cctcgagtca gtgctctgtc tgtcgtgagg
1560
gacctggggg tttttgggat ctacaagggt gccaaagcat gctttctgag ggacattcct
1620
ttctcgcca tctactttcc gtgctatgct catgtgaagg cttcctttgc aaatgaagat
1680
gggcagggtta gccaggaag cctgctctta gctggtgcca tagctgggat gcctgcagca
1740
tctttagtga cccctgctga tgttatcaag acgagattac aggtggctgc ccgggctggc
1800
caaaccactt acagcggagt gatagactgc tttagaaaga tactgcgtga agaaggacca
1860
aaagctctgt ggaagggagc tgggtgctgt gtatttcgat cctcaccaca gtttgggtga
1920
actttgctga cttacgaatt gctacagcga tggttctaca ttgattttgg aggagtaaaa
1980
cccattgggag cagagccagt tcctaaatcc aggatcaacc tgctgcccc gaatcctgat
2040
cacgttgggg gctacaaact ggcagtgtgt acatttgag ggattgaaaa caaatttgga
2100
ctttacctac ctctcttcaa gccatcagta tctacctcaa aggtatttgg tggaggccca
2160
taggaagatc agccctggga tagtgctgtc ttttgggg tactgcagta aagaacatcc
2220
ctcctgggaa tgaagcaatg cttcatccct tttacgtcca tctcttgttt aaattcaagt
2280
ccaggctttt ttatcatgtg aaatcattca ttttctgggt gttttcttaa ccagatcatt
2340
gtgaaattat tcataattat tatttggccc tctgccaga aacctttgtt tgcattgaa
2400
aattgatggg atttgggtcaa cactaacatg atttggggaa aggagcaagt cagaatagaa
2460
attagtactc cctccttga actaggattg tagtcccaa gaggtactg taaggcaatc
2520
atggtgctca gagcagtgtt tctgtgtgtt tttaaactgg taggaaacta ggtgcatatt
2580
tataaaaata aaaaacactg ggagaaatga aaaaatatat atcaaatata ttcagcctgg
2640
cttcaaattg taagcatgca caaattctgt ctctggatta tattatgaag cttttatgtg
2700
aaacatgttt ctttgaatg aaaaccacat tggagatgtt tagtaatcat attgttactg
2760
gtaccaagac tactagggaa atgcctttgt actttaggga agtacttttg gcattttact
2820
gtacagacag aaaaaactga gatgtagccc ctctcctgga agtgctaatt ttgaaaaact
2880
gctcatatga tgtacatgta ctgattactg cctattttaa taaacactct tgaaaaatgc
2940
atgttgccct gttgctgct gccctattct cctcatctcc ccattcattgg taccacttg
3000

cttttaaaat ccactttatc ttgaataatg taagacaaat atgttctgac ataagtattt
 3060
 aattcatgtt gccttgcata atggtcagag ggcgatgaat ttgtgaaggt ggaaataaac
 3120
 tattttgtaaa gtgaaaaaaa aaaaa
 3145

<210> 6022

<211> 708

<212> PRT

<213> Homo sapiens

<400> 6022

Met	Pro	Gln	Ser	Asn	Cys	Cys	Ile	Ala	Phe	Arg	His	Cys	Trp	Leu	Asn
1				5					10					15	
Cys	Pro	Phe	Thr	Trp	His	Ala	Thr	His	Gly	Lys	Val	Lys	Gly	Glu	Gly
			20					25					30		
Asp	Phe	Leu	Leu	His	Val	Ala	Leu	Thr	Lys	Arg	Ala	Asp	Pro	Ala	Glu
		35					40					45			
Leu	Arg	Thr	Ile	Phe	Leu	Lys	Tyr	Ala	Ser	Ile	Glu	Lys	Asn	Gly	Glu
	50					55				60					
Phe	Phe	Met	Ser	Pro	Asn	Asp	Phe	Val	Thr	Arg	Tyr	Leu	Asn	Ile	Phe
65					70					75				80	
Gly	Glu	Ser	Gln	Pro	Asn	Pro	Lys	Thr	Val	Glu	Leu	Leu	Ser	Gly	Val
				85					90					95	
Val	Asp	Gln	Thr	Lys	Asp	Gly	Leu	Ile	Ser	Phe	Gln	Glu	Phe	Val	Ala
		100						105					110		
Phe	Glu	Ser	Val	Leu	Cys	Ala	Pro	Asp	Ala	Leu	Phe	Met	Val	Ala	Phe
		115					120					125			
Gln	Leu	Phe	Asp	Lys	Ala	Gly	Lys	Gly	Glu	Val	Thr	Phe	Glu	Asp	Val
	130					135					140				
Lys	Gln	Val	Phe	Gly	Gln	Thr	Thr	Ile	His	Gln	His	Ile	Pro	Phe	Asn
145					150					155				160	
Trp	Asp	Ser	Glu	Phe	Val	Gln	Leu	His	Phe	Gly	Lys	Glu	Arg	Lys	Arg
			165						170					175	
His	Leu	Thr	Tyr	Ala	Glu	Phe	Thr	Gln	Phe	Leu	Leu	Glu	Ile	Gln	Leu
		180					185						190		
Glu	His	Ala	Lys	Gln	Ala	Phe	Val	Gln	Arg	Asp	Asn	Ala	Arg	Thr	Gly
		195					200					205			
Arg	Val	Thr	Ala	Ile	Asp	Phe	Arg	Asp	Ile	Met	Val	Thr	Ile	Arg	Pro
	210					215					220				
His	Val	Leu	Thr	Pro	Phe	Val	Glu	Glu	Cys	Leu	Val	Ala	Ala	Ala	Gly
225					230					235				240	
Gly	Thr	Thr	Ser	His	Gln	Val	Ser	Phe	Ser	Tyr	Phe	Asn	Gly	Phe	Asn
				245					250				255		
Ser	Leu	Leu	Asn	Asn	Met	Glu	Leu	Ile	Arg	Lys	Ile	Tyr	Ser	Thr	Leu
		260					265						270		
Ala	Gly	Thr	Arg	Lys	Asp	Val	Glu	Val	Thr	Lys	Glu	Glu	Phe	Val	Leu
		275					280					285			
Ala	Ala	Gln	Lys	Phe	Gly	Gln	Val	Thr	Pro	Met	Glu	Val	Asp	Ile	Leu
		290				295					300				
Phe	Gln	Leu	Ala	Asp	Leu	Tyr	Glu	Pro	Arg	Gly	Arg	Met	Thr	Leu	Ala
305					310					315				320	
Asp	Ile	Glu	Arg	Ile	Ala	Pro	Leu	Glu	Glu	Gly	Thr	Leu	Pro	Phe	Asn

```

          325          330          335
Leu Ala Glu Ala Gln Arg Gln Gln Lys Ala Ser Gly Asp Ser Ala Arg
          340          345          350
Pro Val Leu Leu Gln Val Ala Glu Ser Ala Tyr Arg Phe Gly Leu Gly
          355          360          365
Ser Val Ala Gly Ala Val Gly Ala Thr Ala Val Tyr Pro Ile Asp Leu
          370          375          380
Val Lys Thr Arg Met Gln Asn Gln Arg Ser Thr Gly Ser Phe Val Gly
385          390          395          400
Glu Leu Met Tyr Lys Asn Ser Phe Asp Cys Phe Lys Lys Val Leu Arg
          405          410          415
Tyr Glu Gly Phe Phe Gly Leu Tyr Arg Gly Leu Leu Pro Gln Leu Leu
          420          425          430
Gly Val Ala Pro Glu Lys Ala Ile Lys Leu Thr Val Asn Asp Phe Val
          435          440          445
Arg Asp Lys Phe Met His Lys Asp Gly Ser Val Pro Leu Ala Ala Glu
          450          455          460
Ile Leu Ala Gly Gly Cys Ala Gly Gly Ser Gln Val Ile Phe Thr Asn
465          470          475          480
Pro Leu Glu Ile Val Lys Ile Arg Leu Gln Val Ala Gly Glu Ile Thr
          485          490          495
Thr Gly Pro Arg Val Ser Ala Leu Ser Val Val Arg Asp Leu Gly Phe
          500          505          510
Phe Gly Ile Tyr Lys Gly Ala Lys Ala Cys Phe Leu Arg Asp Ile Pro
          515          520          525
Phe Ser Ala Ile Tyr Phe Pro Cys Tyr Ala His Val Lys Ala Ser Phe
          530          535          540
Ala Asn Glu Asp Gly Gln Val Ser Pro Gly Ser Leu Leu Leu Ala Gly
545          550          555          560
Ala Ile Ala Gly Met Pro Ala Ala Ser Leu Val Thr Pro Ala Asp Val
          565          570          575
Ile Lys Thr Arg Leu Gln Val Ala Ala Arg Ala Gly Gln Thr Thr Tyr
          580          585          590
Ser Gly Val Ile Asp Cys Phe Arg Lys Ile Leu Arg Glu Glu Gly Pro
          595          600          605
Lys Ala Leu Trp Lys Gly Ala Gly Ala Arg Val Phe Arg Ser Ser Pro
          610          615          620
Gln Phe Gly Val Thr Leu Leu Thr Tyr Glu Leu Leu Gln Arg Trp Phe
625          630          635          640
Tyr Ile Asp Phe Gly Gly Val Lys Pro Met Gly Ser Glu Pro Val Pro
          645          650          655
Lys Ser Arg Ile Asn Leu Pro Ala Pro Asn Pro Asp His Val Gly Gly
          660          665          670
Tyr Lys Leu Ala Val Ala Thr Phe Ala Gly Ile Glu Asn Lys Phe Gly
          675          680          685
Leu Tyr Leu Pro Leu Phe Lys Pro Ser Val Ser Thr Ser Lys Ala Ile
          690          695          700
Gly Gly Gly Pro
705

```

<210> 6023

<211> 1014

<212> DNA

<213> Homo sapiens

<400> 6023

tttttaaaaa agaatgacat agagccttta ttaaactggt tctgaggtat gtgggactag
 60
 cctggctggc tgaccaggt tcttaagccc cacaggcctc ttccacagaa agggagtttg
 120
 gatcaacaag accatgtaca aaagggggat aatataccta cgtgaggagc caagtttcca
 180
 tgttgatggt aaatggaaaa acttttgagt cagagctgag ctctgggaca aaaagggaaa
 240
 agaagagga tgaagggaag gggcccaatt cctcttgact gattctaaag ctcataagggg
 300
 gattccaact cacagctagc cctctgtact aaggaaccag acgaatcttg acctcccagg
 360
 gaacctagac ctgggaaggc tgaacttgct atttgagggc caagtctact ccctgaaggt
 420
 ggagtgtggt atattttgat ggggacaagg agggacaata gatcaacctc agcaaaggct
 480
 ggtaagcctg ggcaagggtc cacagggatg gatcttccta aggggtgggg gggcttccca
 540
 gttcctagaa aatggcgggt cgcgagact gcctccctcc tcttcattgt agcttgatcc
 600
 tgcgcagtga ccgttcacgg aaagagtcag gcctgggagg ggccggaccg gggcacaaat
 660
 gctggagggt tcagagatgg ctggcgctgg cgaaggcagg tctgccagtg acgtatttgt
 720
 cctgtgggtc ctgggctctt tcgtggcagc cagggcactc tccttctctg gatgggagaa
 780
 tggaattctt ctaggcgagg acgggcagca gcggccctgg gaaggcttcc gtggaaactt
 840
 ccaaaaccac cttgccaggt aagtgaaggt gcgctccgtt ctctagccac atcctagggc
 900
 aagtaagttc ttcttcattc ttccagcagt cctgatcttc ttggggagca ccctaaatc
 960
 agcctgtcaa gaaggaaggc aggtacggg tatcttctca ggaacagatg aagg
 1014

<210> 6024

<211> 100

<212> PRT

<213> Homo sapiens

<400> 6024

Met Lys Arg Arg Glu Ala Val Cys Ala His Arg His Phe Leu Gly Thr
 1 5 10 15
 Gly Lys Pro Pro His Pro Leu Gly Arg Ser Ile Pro Val Glu Pro Cys
 20 25 30
 Pro Gly Leu Pro Ala Phe Ala Glu Val Asp Leu Leu Ser Leu Leu Val
 35 40 45
 Pro Ile Lys Ile Ser Ser Thr Pro Pro Ser Gly Ser Arg Leu Asp Pro
 50 55 60
 Gln Ile Ala Ser Ser Ala Phe Pro Gly Leu Gly Ser Leu Gly Gly Gln
 65 70 75 80
 Asp Ser Ser Gly Ser Leu Val Gln Arg Ala Ser Cys Glu Leu Glu Ser

caactggcgg ccgtgaaggc catcgccctgg tccccacatc agcacgggct gctggcctcg
1380
gggggcggca cagctgaccg ctgtatccgc ttctggaaca cgctgacagg acaaccactg
1440
cagtgtatcg acacgggctc ccaagtgtgc aatctggcct ggtccaagca cgccaacgag
1500
ctggtgagca cgcacggcta ctcacagaac cagatccttg tctggaagta cccctccctg
1560
acccaggtgg ccaagctgac cgggcactcc taccgctgctgtacacggc aatgtccct
1620
gatggggagg ccatcgtcac tgggtgctgga gacgagaccc tgaggttctg gaacgtcttt
1680
agcaaaaacc gtctgacaaa ggtaaagtgg gagtctgtgt ctgtgctcaa cctcttcacc
1740
aggatccggt aaacctgcc aagcaggaccg tgccacacca gctgtccaga gtcggaggac
1800
cccagctcct cagcttgcac ggactctgcc ttcccagcgc ttgtccccc aggaaggcgg
1860
ctgggcgggc ggggagctgg gcctggagga tcttgagtc tcatataatg cctgattgtg
1920
aaccatgtcc accagtatct ggggtgggca cgtggctggg gacctcagc agcaggggct
1980
ctgtctccct tcccaaagg cgagaaccac attggacggt cccggctcag accgtctgta
2040
ctcagagcga cggatgcccc ctgggaccct cactgcctcc gtctgttcat cactgcccc
2100
ccggagccgc atgtctctcc tgggaactgcc cagctctgca cagaacagac caccagacgc
2160
cagggtgat tgggtggggc ctgagacccc cgggtgcccc ttcattgctg cccccacca
2220
tgtcaaaccc aagaccagcc ccaaggccag accaaggcat gtaggcctgg gcagggtggct
2280
cggggccact ggcggagcca gcttgtggat ccaagagaca gtccccacct gggcttcacg
2340
gcacccctgc agccacctct gctgtcactg ctccaagcag cagtctctct gcaagcatct
2400
gtgtcatggc catcgcccg cggtcagtg gcttcagatg ggctgtgca tccctggccaa
2460
gcgtcaccct cactcggag gaggatgtct gctctggact tatcaccaca ggagaactga
2520
acccggacct gctcactgcc ctggctggag aggagcaca cagatgccac gtcttcgtgc
2580
attcgccaac acgtgccctc acagggccag cgtctcctt cctgcgcaa gacttgctc
2640
ccccatgct gctgggtggc tgggtcctgt ggaggccagc agcgggtgtg ccccccccc
2700
caggctgctt gtgtcttcac ctgtcctgtc caccagcgcc aacagccgtg gggaagccaa
2760
ggagacccaa ggggtccagg aggtgggcgc cctccatcct tcgagaagct tcccaggctc
2820
ctctgctct ctgtctcatg ctcccaggct gcacagcagg caggaggga ggcaaggcag
2880
gggagtgagg cctgagctga gactgcccc ctcaccccc caccacctt tcccatttca
2940

tccgtgggga cgtggagagg gtggggcggg ctgggggttg agggteccac ccaccaccct
3000
gctgtgcttg ggaacccccca ctccccactc cccacatccc aacatcctgg tgtctgtccc
3060
cagtgggggtt ggcgtgcatg tgtacatatg tatttgtgac ttttcttttg atttgttttg
3120
tgtttttgtt gactagtccct ggaaatgttt gaggctagac ggggaggggc caggaccacc
3180
ccactgctcc tgggggatga ggtcctgggt ttaaagcccc gtcatttcaa gcgggtcgat
3240
cttccacatt cactggagag actctcccca cctctgtctg ggtggggcgc ggaccctca
3300
ctgtgcgcct gtgcaggggg tgctggtgca cgtggcagtg tggatttcca gtggtcacgg
3360
tcttactgtt tcaagggttt taaataagaa aaccaaccct gccttcgccc atgcccgccc
3420
ctgcccgcag ttgccaaaga gccgccttgt cgctgtgggc gtcagggcctt ggctggctca
3480
gtgcacaacc cacagtggcc ttcagaggct cctcctggga ctgggaaccg ccgcagggcc
3540
aggcggacgg cgtgagggtt gtgttggggc tggttctgcc catgctaggg ggtgggggag
3600
ctcccaggac agaccagcct tgtttctcat gtaatgcagt gacgctgtca ttaaacacgt
3660
ggattcatgt gtggccggga ctggctggct ctaggtcccc ggctcgggtg gggtcacacg
3720
gtcctgcctc agagccccca tctggccctg gagctgcaga agcagcttct gaggggcttc
3780
ccaggcctgc atttcacaga tggggagctc agccctcgaa ggccgcagag acgcctccca
3840
ggcccgctcg ccagggcgcc ggccacaatc ctgcagggcc aaggactgga ctccaggcaa
3900
gtccctgcgc tccagctgga cggccctgtt ccagggagga ggtgctcggc tgacaccatc
3960
agggagggag ggtgggcact gctgggctga gttcaccccc agggctggcc agatggggcc
4020
aggagggaca gagcaagggg ggtgaaggcc gtggtgggag ggtcccatga tgatgggcca
4080
gggctcgtgt agaaatgggg gaattggttc cccatggccc aggacagctg agaggaggtg
4140
gaggggcccc aggggagtgt acgtcaggct ttgcggggca cgggggccac tcagcagcgc
4200
tggggcaggt gcctctgctg tcagctccac ccgacaggca gacgaaggcc agtggggcca
4260
tcgcttctcg gggcgacctt ggcagtgggt gggagacgcc cagatggagg gggaggctga
4320
ccaaggcccc cgcagggcgg gctgcaactt ttctgttgat cctggaatgt agctggtgca
4380
gtgagaggga aagagaattg aaaaactcag gctgccatag gttctgcgat gagaggtgca
4440
ggaggcagga gcctggccca gggggtgctg gtgcctcccc ggggtctggg cggagagaac
4500
aggaggaatg gctgggaagt ggctgaggga gccaggaggc cggggggccg ggggctgcag
4560

gggaggctgt gggggtcctg gcagccagga gggcccaggt ggttttgagg ctgctcttgc
 4620
 cgcgggtgcct gagaagaggg tgaaggagct ggggcaggcc ccatcctggg cattggagat
 4680
 gatgaaaccg agcagacctg gcccattgtg agctggcatg ggggacacag cccagagaca
 4740
 gagaagctta tgaggaagtg aggaggtggc gtcacaaggg tggggagggg gccttgggga
 4800
 agggcggcct tggatcagag gctcaccaca agcctggcat ttcagccagg gctggagaag
 4860
 gcagggacgc ctgggtgaga ggcaaagggc acagccatgc aaaggccctg gggcaggacg
 4920
 gcacctggta tgcgggagga acagagttag gagaggaggg cagggcgtgc agggccttgc
 4980
 gggcctcagg gaggacttgg gcacctacc caggggagtg gagctcctgg gtgcgtgtcc
 5040
 agatgggaaa ggcagggtcg tatctgtggg gacctgacaa gggcagggga agcggagacc
 5100
 aggggtcagg ctccgcccc acccaaggcc gggcccagcc agaggagggg cagggcaggg
 5160
 caggaggttt ctggatgttt gttgggtttg gtttggtttt gttttgtttt gtttattgtg
 5220
 gtaaaataca aaatctaccg tcttacagtg aggtggcggt cagtaccttc accacgccgt
 5280
 gcagccatcc catctgattc cagaacattc tcatcaccca gaaggcagcc ctgtcccat
 5340
 tatgtcacct agtcaccccc aggtccccct cccagtcctc ggcacccacg aatcctctcc
 5400
 ctgattctgt ggattgggtc gtccctggaca tttcatagaa gtgggatcac agcgtacctt
 5460
 tctgtgtctg gtgtctctca ctgagcgtga catcctcaag gtgcatccgc actgtggcct
 5520
 gggtcagagc ttcgcacctc cttgtggctg agtctcattc cagcgcgtgg gtgctgggt
 5580
 ggcggcgccg tgcgtatccc ctccacctca ctgggtgttc ggtgttctcc gcctcgggct
 5640
 gtcacaaatc gtgctgctgt gagccactgc gtgcaggctc catcctgggt gtattttaca
 5700
 aacggactgg atgtgagtgg gtgaggagtg aggagctggg gtgacagggt cctgcgaccc
 5760
 cggccaggca ctgcctctg cgatcgaagg ggcaggggga gacagaagcc cctcaagggg
 5820
 gtgtggagat ggagaagcca gaccccaggt ggggggtgca tagagctggg gctcaggcca
 5880
 cgacccacc tggcagtgcc ctgcc
 5905

<210> 6026

<211> 496

<212> PRT

<213> Homo sapiens

<400> 6026

Met Asp Gln Asp Tyr Glu Arg Arg Leu Leu Arg Gln Ile Val Ile Gln

1	5	10	15
Asn Glu Asn Thr Met Pro Arg Val Thr Glu Met Arg Arg Thr Leu Thr			
20	25	30	
Pro Ala Ser Ser Pro Val Ser Ser Pro Ser Lys His Gly Asp Arg Phe			
35	40	45	
Ile Pro Ser Arg Ala Gly Ala Asn Trp Ser Val Asn Phe His Arg Ile			
50	55	60	
Asn Glu Asn Glu Lys Ser Pro Ser Gln Asn Arg Lys Ala Lys Asp Ala			
65	70	75	80
Thr Ser Asp Asn Gly Lys Asp Gly Leu Ala Tyr Ser Ala Leu Leu Lys			
85	90	95	
Asn Glu Leu Leu Gly Ala Gly Ile Glu Lys Val Gln Asp Pro Gln Thr			
100	105	110	
Glu Asp Arg Arg Leu Gln Pro Ser Thr Pro Glu Lys Lys Gly Leu Phe			
115	120	125	
Thr Tyr Ser Leu Ser Thr Lys Arg Ser Ser Pro Asp Asp Gly Asn Asp			
130	135	140	
Val Ser Pro Tyr Ser Leu Ser Pro Val Ser Asn Lys Ser Gln Lys Leu			
145	150	155	160
Leu Arg Ser Pro Arg Lys Pro Thr Arg Lys Ile Ser Lys Ile Pro Phe			
165	170	175	
Lys Val Leu Asp Ala Pro Glu Leu Gln Asp Asp Phe Tyr Leu Asn Leu			
180	185	190	
Val Asp Trp Ser Ser Leu Asn Val Leu Ser Val Gly Leu Gly Thr Cys			
195	200	205	
Val Tyr Leu Trp Ser Ala Cys Thr Ser Gln Val Thr Arg Leu Cys Asp			
210	215	220	
Leu Ser Val Glu Gly Asp Ser Val Thr Ser Val Gly Trp Ser Glu Arg			
225	230	235	240
Gly Asn Leu Val Ala Val Gly Thr His Lys Gly Phe Val Gln Ile Trp			
245	250	255	
Asp Ala Ala Ala Gly Lys Lys Leu Ser Met Leu Glu Gly His Thr Ala			
260	265	270	
Arg Val Gly Ala Leu Ala Trp Asn Ala Glu Gln Leu Ser Ser Gly Ser			
275	280	285	
Arg Asp Arg Met Ile Leu Gln Arg Asp Ile Arg Thr Pro Pro Leu Gln			
290	295	300	
Ser Glu Arg Arg Leu Gln Gly His Arg Gln Glu Val Cys Gly Leu Lys			
305	310	315	320
Trp Ser Thr Asp His Gln Leu Leu Ala Ser Gly Gly Asn Asp Asn Lys			
325	330	335	
Leu Leu Val Trp Asn His Ser Ser Leu Ser Pro Val Gln Gln Tyr Thr			
340	345	350	
Glu His Leu Ala Ala Val Lys Ala Ile Ala Trp Ser Pro His Gln His			
355	360	365	
Gly Leu Leu Ala Ser Gly Gly Thr Ala Asp Arg Cys Ile Arg Phe			
370	375	380	
Trp Asn Thr Leu Thr Gly Gln Pro Leu Gln Cys Ile Asp Thr Gly Ser			
385	390	395	400
Gln Val Cys Asn Leu Ala Trp Ser Lys His Ala Asn Glu Leu Val Ser			
405	410	415	
Thr His Gly Tyr Ser Gln Asn Gln Ile Leu Val Trp Lys Tyr Pro Ser			
420	425	430	
Leu Thr Gln Val Ala Lys Leu Thr Gly His Ser Tyr Arg Val Leu Tyr			

435 440 445
 Leu Ala Met Ser Pro Asp Gly Glu Ala Ile Val Thr Gly Ala Gly Asp
 450 455 460
 Glu Thr Leu Arg Phe Trp Asn Val Phe Ser Lys Thr Arg Ser Thr Lys
 465 470 475 480
 Val Lys Trp Glu Ser Val Ser Val Leu Asn Leu Phe Thr Arg Ile Arg
 485 490 495

<210> 6027
 <211> 305
 <212> DNA
 <213> Homo sapiens

<400> 6027
 nncccggggc tggggaagac caccctggca cacgtgattg cgcgtcacgc ggggtactct
 60
 gtggtggaga tgaatgccag tgacgaccgt agcccgagg tcttccgcac acgcatcgag
 120
 gcggccaccc aaatggagtc ggggcttggg gctgccggga agcccaactg cctggtcac
 180
 gatgagatcg acggggcccc cgtggtgggc tccttgatgc ctgggtaggt ggggtggcgg
 240
 gcaggcaggg gggcagcagg gcctggactc accgtgtcct ctgacctccc ccaaggccgc
 300
 catca
 305

<210> 6028
 <211> 75
 <212> PRT
 <213> Homo sapiens

<400> 6028
 Xaa Pro Gly Leu Gly Lys Thr Thr Leu Ala His Val Ile Ala Arg His
 1 5 10 15
 Ala Gly Tyr Ser Val Val Glu Met Asn Ala Ser Asp Asp Arg Ser Pro
 20 25 30
 Glu Val Phe Arg Thr Arg Ile Glu Ala Ala Thr Gln Met Glu Ser Gly
 35 40 45
 Leu Gly Ala Ala Gly Lys Pro Asn Cys Leu Val Ile Asp Glu Ile Asp
 50 55 60
 Gly Ala Pro Val Val Gly Ser Leu Met Pro Gly
 65 70 75

<210> 6029
 <211> 1350
 <212> DNA
 <213> Homo sapiens

<400> 6029
 tttttttttt ttttttttga tggaaaatag gatttattgg gggaaccgta caagcagagg
 60
 agaagcaggg gtgccaggc tgtcacagcc ttgcagtgca tgggtgggttc cgtggccaac
 120

ttgccagggg acaggcctgt tgctggcact cccccacaa ttacaggggtg ggagtgaagg
 180
 acctcgcggc tgcggacagg tccttgtag taaggaggag gctctgcagt ccggtgggg
 240
 tcattctgcc tctccggact gtccctctg actggtgaag ccacactctg tgaagctgtc
 300
 tgacagaagg ggacacgcct ttgctgcca ggatggacct gggccacca ggatgccgt
 360
 ggctcagcc agggcacgtg tgcccagcgc tggctcctgc tgacctctg actggctccc
 420
 atctcgga tgcgcctgc cgtgggaatc gtggagagg ggtttaattt aacttgaag
 480
 gacacagaa aggaaagtgt ggagtgcgga gcgaggcctc tggtttgcc ggctccggtt
 540
 gctggggatg gccacacctt ggcagcaggc ggccagagac caggaaaggcc taccagcac
 600
 ctgtccagaa aagattggtg tgggttgacc tggcctatgc ggggcagctc agtttgaagc
 660
 aggaacttcc ccaaactgtc ccaggtcca agacagcagc attcactttg caccgtgctg
 720
 agcagagcgg ggctcgcca ggtggaaagc cctaggaagg ctgcgtgctc tgcaaaccca
 780
 ggggtgctgt ggccgtacag caggggcgtc cgtgtccagg cagctttgtc atgtcttcca
 840
 aaggtcagga aggcgccacc gccctgcccc acgacagctg cgtctgcaag cgccagctct
 900
 gagcaactgt ctccgcccac atgaggacac catccaagaa ttcctcctgg gagacctct
 960
 gaggagacgc gaagaccatc gatgctttgg aagaatgaaa agaagtttct gctaagccaa
 1020
 acctaggtgg atgggaagtg cctgtgtgga tgtgaagcca ccttgggtgg gcggctcgga
 1080
 gtcctctgc ccacatgcc tcaactgggac tggccatcca gtctgacgtc tttgatgtcc
 1140
 ccataaatct gctggcttcc aggagaacac gtcttgaagc acagctgaac ttgaatcttt
 1200
 tctgggtcct cctgctgggc cgtggtgggg agccgctccc gttgcctcaa ggctccaag
 1260
 cctgccaggt caggctgatg gcagtggctg cgcattgacca tgatgcgggtg gccctggtt
 1320
 atgcgaggct tcggcagccc agccgagcct
 1350

<210> 6030

<211> 99

<212> PRT

<213> Homo sapiens

<400> 6030

Met Gly Thr Ser Lys Thr Ser Asp Trp Met Ala Ser Pro Ser Glu Ala
 1 5 10 15
 Met Trp Ala Glu Leu Arg Ala Ala His Pro Arg Trp Leu His Ile
 20 25 30
 His Thr Gly Thr Ser His Pro Pro Arg Phe Gly Leu Ala Glu Thr Ser

35	40	45
Phe His Ser Ser Lys Ala Ser Met Val Phe Ala Ser Pro Gln Glu Val		
50	55	60
Ser Gln Glu Glu Phe Leu Asp Gly Val Leu Met Ser Ala Glu Asn Ser		
65	70	75
Ala Gln Ser Trp Arg Leu Gln Thr Gln Leu Ser Trp Gly Arg Ala Val		
85	90	95
Ala Pro Ser		

<210> 6031
 <211> 1316
 <212> DNA
 <213> Homo sapiens

<400> 6031
 nntctagacc agtatgcccc agatgtggcc gaactcatcc ggacccctat ggaaatgcgt
 60
 tacatccctt tgaaagtggc cctgttctat ctcttaaate cttacacgat tttgtcttgt
 120
 gttgccaaagt ctacctgtgc catcaacaac accctcattg ctttcttcat tttgactacg
 180
 ataaaaggca gtgctttcct cagtgtctatt tttcttgcc ttagcgacata ccagtctctg
 240
 taccactca ccttgtttgt cccaggactc ctctatctcc tccagcggca gtacatacct
 300
 gtgaaaatga agagcaaaagc cttctggatc tttcttggg agtatgccat gatgtatgtg
 360
 ggaagcctag tggtaatcat ttgcctctcc ttcttcttc tcagctcttg ggatttcate
 420
 cccgcagtct atggctttat actttctgtt ccagatctca ctccaaacat tggctctttc
 480
 tggtaactct ttgcagagat gtttgagcac ttcagcctct tctttgtatg tgtgtttcag
 540
 atcaacgtct tcttctacac catcccccta gccataaagc taaaggagca ccccatcttc
 600
 ttcatgttta tccagatcgc tgtcatcgcc atctttaagt cctaccgcac agtgggggac
 660
 gtggcgctct acatggcctt cttccccgtg tggaaccatc tctacagatt cctgagaaac
 720
 atctttgtcc tcacctgcat catcatcgtc tgttccctgc tcttccctgt cctgtggcac
 780
 ctctggattt atgcaggaag tgccaactct aatttctttt atgccatcac actgaccttc
 840
 aacgttgggc agatcctgct catctctgat tacttctatg ccttccctgc gcgggagtac
 900
 tacctcacac atggcctcta cttgaccgcc aaggatggca cagaggccat gctcgtgctc
 960
 aagtaggcct ggctggcaca gggctgcatg gacctcaggg ggctgtgggg ccagaagctg
 1020
 ggccaagccc tccagccaga gttgccagca ggcgagtgtc tgggcagaag aggttcgagt
 1080
 ccagggtcac aagtctctgg taccaaaagg gacccatggc tgactgacag caaggcctat
 1140

ggggaagaac tgggagctcc ccaacttgga ccccccacctt gtggctctgc acaccaagga
 1200
 gccccctccc agacaggaag gagaagaggc aggtgagcag ggcttgtag attgtggcta
 1260
 cttataaat gttttttgtt atgaagtcta aaaaaaaaaa aaaaaaaaaa aaaaaa
 1316

<210> 6032

<211> 321

<212> PRT

<213> Homo sapiens

<400> 6032

Xaa	Leu	Asp	Gln	Tyr	Ala	Pro	Asp	Val	Ala	Glu	Leu	Ile	Arg	Thr	Pro
1			5						10					15	
Met	Glu	Met	Arg	Tyr	Ile	Pro	Leu	Lys	Val	Ala	Leu	Phe	Tyr	Leu	Leu
			20					25					30		
Asn	Pro	Tyr	Thr	Ile	Leu	Ser	Cys	Val	Ala	Lys	Ser	Thr	Cys	Ala	Ile
		35				40						45			
Asn	Asn	Thr	Leu	Ile	Ala	Phe	Phe	Ile	Leu	Thr	Thr	Ile	Lys	Gly	Ser
	50					55				60					
Ala	Phe	Leu	Ser	Ala	Ile	Phe	Leu	Ala	Leu	Ala	Thr	Tyr	Gln	Ser	Leu
65					70					75				80	
Tyr	Pro	Leu	Thr	Leu	Phe	Val	Pro	Gly	Leu	Leu	Tyr	Leu	Leu	Gln	Arg
			85						90				95		
Gln	Tyr	Ile	Pro	Val	Lys	Met	Lys	Ser	Lys	Ala	Phe	Trp	Ile	Phe	Ser
			100					105					110		
Trp	Glu	Tyr	Ala	Met	Met	Tyr	Val	Gly	Ser	Leu	Val	Val	Ile	Ile	Cys
	115					120						125			
Leu	Ser	Phe	Phe	Leu	Leu	Ser	Ser	Trp	Asp	Phe	Ile	Pro	Ala	Val	Tyr
	130					135				140					
Gly	Phe	Ile	Leu	Ser	Val	Pro	Asp	Leu	Thr	Pro	Asn	Ile	Gly	Leu	Phe
145					150					155				160	
Trp	Tyr	Phe	Phe	Ala	Glu	Met	Phe	Glu	His	Phe	Ser	Leu	Phe	Phe	Val
			165					170					175		
Cys	Val	Phe	Gln	Ile	Asn	Val	Phe	Phe	Tyr	Thr	Ile	Pro	Leu	Ala	Ile
			180					185					190		
Lys	Leu	Lys	Glu	His	Pro	Ile	Phe	Phe	Met	Phe	Ile	Gln	Ile	Ala	Val
	195						200					205			
Ile	Ala	Ile	Phe	Lys	Ser	Tyr	Pro	Thr	Val	Gly	Asp	Val	Ala	Leu	Tyr
	210					215					220				
Met	Ala	Phe	Phe	Pro	Val	Trp	Asn	His	Leu	Tyr	Arg	Phe	Leu	Arg	Asn
225					230					235				240	
Ile	Phe	Val	Leu	Thr	Cys	Ile	Ile	Ile	Val	Cys	Ser	Leu	Leu	Phe	Pro
			245						250					255	
Val	Leu	Trp	His	Leu	Trp	Ile	Tyr	Ala	Gly	Ser	Ala	Asn	Ser	Asn	Phe
			260					265					270		
Phe	Tyr	Ala	Ile	Thr	Leu	Thr	Phe	Asn	Val	Gly	Gln	Ile	Leu	Leu	Ile
		275					280					285			
Ser	Asp	Tyr	Phe	Tyr	Ala	Phe	Leu	Arg	Arg	Glu	Tyr	Tyr	Leu	Thr	His
	290					295					300				
Gly	Leu	Tyr	Leu	Thr	Ala	Lys	Asp	Gly	Thr	Glu	Ala	Met	Leu	Val	Leu
305					310					315				320	
Lys															

<210> 6033
<211> 5157
<212> DNA
<213> Homo sapiens

<400> 6033
caattgctct atgtagtgcc ctttgttgcc aaagtcttag aatctagcat tcgtagtggtg
60
gttttttaggc caccaaacc ttggacaatg gcaattatga atgtattagc tgagctacat
120
caggagcatg acttaaagtt aaacttgaag tttgaaatcg aggttctctg caagaacctt
180
gcattagaca tcaatgagct aaaacctgga aacctcctaa aggataaaga tcgcctgaag
240
aatttagatg agcaactctc tgctccaagg aaagatgtca agcagccaga agaactccct
300
cccatcacia ccacaacaac ttctactaca ccagctacca acaccacttg tacagccacg
360
gttccaccac agccacagta cagctaccac gacatcaatg tctattccct tgcgggcttg
420
gcaccacaca ttactctaaa tccaacaatt cccttgtttc aggcccatcc acagttgaag
480
cagtggtgtgc gtcaggcaat tgaacgggct gtccaggagc tgggccatcc tgtggtggat
540
cgatcaatta agattgccat gactacttgt gagcaaatag tcaggaagga ttttgccctg
600
gattcggagg aatctcgaat gcgaatagca gctcatcaca tgatgcgtaa cttgacagct
660
ggaatggcta tgattacatg cagggaacct ttgctcatga gcatactac caacttaaaa
720
aacagttttg cctcagccct tcgtactgct tccccacaac aaagagaaat gatggatcag
780
gcagctgctc aattagctca ggacaattgt gagttggctt gctgttttat tcagaagact
840
gcagtagaaa aagcaggccc tgagatggac aagagattag caactgaatt tgagctgaga
900
aaacatgcta ggcaagaagg acgcagatac tgtgatoctg ttgttttaac atatcaagct
960
gaacgggatgc cagagcaaat caggctgaaa gttggtggtg tggacccaaa gcagttggct
1020
gtttacgaag agtttgacg caatgttctt ggcttcttac ctacaaatga ctttaagtcag
1080
cccacgggat ttttagccca gcccatgaag caagcttggg caacagatga tgtagctcag
1140
atttatgata agtgatttac agaactggag caacatctac atgccatccc accaactttg
1200
gccatgaacc ctcaagctca ggctcttcga agtctcttg aggttgtagt tttatctcga
1260
aactctcggg atgcatagc tgctcttgga ttgctccaaa aggtgtgaga gggcttacta
1320
gatgccacaa gtggtgctga tgctgacctt ctgctgcgct acagggaatg ccacctcttg
1380

gtcctaaaag ctctgcagga tggccgggca tatgggtctc catggtgcaa caaacagatc
1440
acaaggtgcc taattgaatg tcgagatgaa tataaatata atgtggaggc tgtggagctg
1500
ctaattcgca atcatttggg taatatgcag cagtatgatc ttcacctagc gcagtcaatg
1560
gagaatggct taaactacat ggctgtggca tttgctatgc agttagtaaa aatcctgctg
1620
gtggatgaaa ggagtgttgc tcatgttact gaggcagatc tgttccacac cattgaaacc
1680
ctcatgagga ttaatgetca ttccagaggc aatgctccag aaggattgcc ccagctgatg
1740
gaagtagtgc gatccaacta tgaagcaatg attgatcgtg ctcatggagg cccaaacttt
1800
atgatgcatt ctgggatctc tcaagcctca gagtatgatg accctccagg cctgagggag
1860
aaggcagagt atcttctgag ggaatgggtg aatctctacc attcagcagc agctggccgc
1920
gacagtacca aagctttctc tgcatttgtt ggacaggtag agcttttga aagaaagatg
1980
caccagcaag gaatactgaa gaccgatgat ctcataacaa ggttctttcg tctgtgtact
2040
gaaatgtgtg ttgaaatcag ttaccgtgct caggetgagc agcagcaciaa tcctgctgcc
2100
aatcccacca tgatccgagc caagtgtat cacaacctgg atgcctttgt tgcactcatt
2160
gcactgctcg tgaacactc aggggaggcc accaactctg tcacaaagat taatctgctg
2220
aacaaggtcc ttggtatagt agtgggagtt ctcttcagg atcatgatgt tcgtcagagt
2280
gaatttcagc aattcccta ccatcgaatt tttatcatgc ttctcttga actcaatgca
2340
cctgagcatg tgttggaac cattaatttc cagacactta cagctttctg caatacatc
2400
cacatcttga ggccatcaa agctcctggc tttgtatatg cctggcttga actgatttcc
2460
catcggatat ttattgcaag aatgctggca catagccac agcagaaggg gtggcctatg
2520
tatgcacagc tactgattga tttattcaaa tatttagcgc ctttccttag aaatgtggaa
2580
ctcaccaaac ctatgcaaat cctctacaag ggcactttaa gagtgtgct ggttctttg
2640
catgatttcc cagagttcct ttgtgattac cattatgggt tctgtgatgt gateccacct
2700
aattgtatcc agttaagaaa tttgatcctg agtgccttcc caagaaacat gaggtcccc
2760
gaccattca ctctaatct aaagggtgac atgttgagt aaattaacat tgctccccgg
2820
attctacca atttactgg agtaatgcca cctcagttca aaaaggattt ggattcctat
2880
cttaaaactc gatcaccagt cactttcctg tctgatctgc gcagcaacct acaggatatc
2940
aatgaacctg ggaatcgcta caacctccag ctcatcaatg cactggtgct ctatgtcggg
3000

actcaggcca ttgcgcacat ccacaacaag ggcagcacac cttcaatgag caccatcact
3060
cactcagcac acatggatat cttccagaat ttggctgtgg acttggacac tgagggtcgc
3120
tatctctttt tgaatgcaat tgcaaatcag ctccgggtacc caaatagcca cactcactac
3180
ttcagttgca ccatgctgta cttttttgca gaggccaata cggaagccat ccaagaacag
3240
atcacaagag ttctcttgga acggttgatt gtaaataaggc cacatccttg gggctcttct
3300
attaccttca ttgagctgat taaaaaccca gcgtttaagt tctggaacca tgaatttgta
3360
cactgtgccc cagaaatcga aaagttattc cagtcgggtcg cacagtgtcg catgggacag
3420
aagcaggccc agcaagtaat ggaagggaca ggtgccagtt agacgaaact gcatctctgt
3480
tgtacgtgtc agtctagagg tctcactgca ccgagttcat aaactgactg aagaatcctt
3540
tcagctcttc ctgactttcc cagccctttg gtttgtgggt atctgcccc actactgttg
3600
ggatcagcct cctgtcttat gtgggcacgt tccaaagttt aaatgcattt ttttgactct
3660
tggccaaaat ttagaagatg ctgtgaatat cttttgaaac ttgtgtaaat acatgaaaga
3720
gaaaaccttt gtctggaact tcttggcttt gtgcaagctg tgtccaaggc aagtacataa
3780
actgggtacct tgtaatgaag aggcagctga tgccatgcac ttgtctgagg gcatagctcc
3840
atgtcttctg acattcctgg tgtcccaaag aatagcaaaa agccagtttg aatattatgt
3900
aacttatttt tttaatgtgg acaggggacc ttgaaaatca ctaagttatt aaaaatgtgg
3960
atgtgctaga attggatatg tccaggaaca tgggaagggc tcactattgg aatcccatga
4020
gtttccattt tgtctctacc caaacgtatt ccaaagctga ctgcatttgt accatcttat
4080
ttcttttggg gattatacac ctccagccgc tgagatgggg gtcagctctt tatataaagg
4140
gaaaccagac caggcctaaa gccaccccc taccctcacc cccacaatcc tctcctgaaa
4200
cttaaaaaca gtgggaatat aggaaaggga accaaatctc attaatattt tgttctcccc
4260
cattacccca ctgaatgaat ggccatacag gctaagctga ataatgacaa agttgaaagg
4320
accaatacag ccccttttat aaggattttg aatgttttgc aaatgtattg gtccctgtgt
4380
tgtattttgt agccttttcc tgggcttcag ctccctact tcttgtatgt gtatgcatac
4440
tgtagctaac cattaaagtc atgacacaca catgagtcca ctgtgccttt ctgagtagca
4500
gcaggcagtg ctggtggtga ggaggaaaag tggacaatcc agccctgtag accttggggc
4560
catgggggaa caacaactaa cttcttgctg aatgattgat ttgattgatt gattgatagg
4620

tcattcctac tactaagctg gcatgtttta ggaaattgta tttttcttcc tatttatctc
 4680
 aacactggac aaatgctgga gcaggtttat ctggttaagc tgagtttaaa ataccaggtt
 4740
 ttaatacct tttccccag gtattttttt ttttttttaa agaaaatgag tagatacgta
 4800
 tttaaaaact taaccactt aaaatttgcc ttacctttca tgactgtcaa gttttatggc
 4860
 cagagaggac aaaacagttc aaaattaaat aattgaagtc ctcttgagt gatgtcttag
 4920
 ggttttattcc ctgagaggtg gtttgtgcca tctagactga actttgggta actatcgagt
 4980
 accagttaca cagcttatta aatccagagt cttttcaata aagggttaagt gacttcctca
 5040
 aactagactt agatttaaac caggggtcta cctccaaagt ctattattaa atgctgaaac
 5100
 acaacaagac ttacttatta ctaccgtatg tccactggct ttgggtaaaa ctgagaa
 5157

<210> 6034

<211> 1096

<212> PRT

<213> Homo sapiens

<400> 6034

Lys	Asn	Leu	Ala	Leu	Asp	Ile	Asn	Glu	Leu	Lys	Pro	Gly	Asn	Leu	Leu
1				5					10					15	
Lys	Asp	Lys	Asp	Arg	Leu	Lys	Asn	Leu	Asp	Glu	Gln	Leu	Ser	Ala	Pro
		20					25					30			
Arg	Lys	Asp	Val	Lys	Gln	Pro	Glu	Glu	Leu	Pro	Pro	Ile	Thr	Thr	Thr
		35					40					45			
Thr	Thr	Ser	Thr	Thr	Pro	Ala	Thr	Asn	Thr	Thr	Cys	Thr	Ala	Thr	Val
		50				55					60				
Pro	Pro	Gln	Pro	Gln	Tyr	Ser	Tyr	His	Asp	Ile	Asn	Val	Tyr	Ser	Leu
65				70					75					80	
Ala	Gly	Leu	Ala	Pro	His	Ile	Thr	Leu	Asn	Pro	Thr	Ile	Pro	Leu	Phe
				85					90					95	
Gln	Ala	His	Pro	Gln	Leu	Lys	Gln	Cys	Val	Arg	Gln	Ala	Ile	Glu	Arg
			100					105				110			
Ala	Val	Gln	Glu	Leu	Val	His	Pro	Val	Val	Asp	Arg	Ser	Ile	Lys	Ile
		115					120					125			
Ala	Met	Thr	Thr	Cys	Glu	Gln	Ile	Val	Arg	Lys	Asp	Phe	Ala	Leu	Asp
	130					135					140				
Ser	Glu	Glu	Ser	Arg	Met	Arg	Ile	Ala	Ala	His	His	Met	Met	Arg	Asn
	145				150				155					160	
Leu	Thr	Ala	Gly	Met	Ala	Met	Ile	Thr	Cys	Arg	Glu	Pro	Leu	Leu	Met
			165					170					175		
Ser	Ile	Ser	Thr	Asn	Leu	Lys	Asn	Ser	Phe	Ala	Ser	Ala	Leu	Arg	Thr
		180					185						190		
Ala	Ser	Pro	Gln	Gln	Arg	Glu	Met	Met	Asp	Gln	Ala	Ala	Ala	Gln	Leu
		195					200					205			
Ala	Gln	Asp	Asn	Cys	Glu	Leu	Ala	Cys	Cys	Phe	Ile	Gln	Lys	Thr	Ala
	210					215						220			
Val	Glu	Lys	Ala	Gly	Pro	Glu	Met	Asp	Lys	Arg	Leu	Ala	Thr	Glu	Phe

```

225          230          235          240
Glu Leu Arg Lys His Ala Arg Gln Glu Gly Arg Arg Tyr Cys Asp Pro
          245          250          255
Val Val Leu Thr Tyr Gln Ala Glu Arg Met Pro Glu Gln Ile Arg Leu
          260          265          270
Lys Val Gly Gly Val Asp Pro Lys Gln Leu Ala Val Tyr Glu Glu Phe
          275          280          285
Ala Arg Asn Val Pro Gly Phe Leu Pro Thr Asn Asp Leu Ser Gln Pro
          290          295          300
Thr Gly Phe Leu Ala Gln Pro Met Lys Gln Ala Trp Ala Thr Asp Asp
305          310          315          320
Val Ala Gln Ile Tyr Asp Lys Cys Ile Thr Glu Leu Glu Gln His Leu
          325          330          335
His Ala Ile Pro Thr Leu Ala Met Asn Pro Gln Ala Gln Ala Leu
          340          345          350
Arg Ser Leu Leu Glu Val Val Val Leu Ser Arg Asn Ser Arg Asp Ala
          355          360          365
Ile Ala Ala Leu Gly Leu Leu Gln Lys Ala Val Glu Gly Leu Leu Asp
370          375          380
Ala Thr Ser Gly Ala Asp Ala Asp Leu Leu Leu Arg Tyr Arg Glu Cys
385          390          395          400
His Leu Leu Val Leu Lys Ala Leu Gln Asp Gly Arg Ala Tyr Gly Ser
          405          410          415
Pro Trp Cys Asn Lys Gln Ile Thr Arg Cys Leu Ile Glu Cys Arg Asp
          420          425          430
Glu Tyr Lys Tyr Asn Val Glu Ala Val Glu Leu Leu Ile Arg Asn His
          435          440          445
Leu Val Asn Met Gln Gln Tyr Asp Leu His Leu Ala Gln Ser Met Glu
          450          455          460
Asn Gly Leu Asn Tyr Met Ala Val Ala Phe Ala Met Gln Leu Val Lys
465          470          475          480
Ile Leu Leu Val Asp Glu Arg Ser Val Ala His Val Thr Glu Ala Asp
          485          490          495
Leu Phe His Thr Ile Glu Thr Leu Met Arg Ile Asn Ala His Ser Arg
          500          505          510
Gly Asn Ala Pro Glu Gly Leu Pro Gln Leu Met Glu Val Val Arg Ser
          515          520          525
Asn Tyr Glu Ala Met Ile Asp Arg Ala His Gly Gly Pro Asn Phe Met
          530          535          540
Met His Ser Gly Ile Ser Gln Ala Ser Glu Tyr Asp Asp Pro Pro Gly
545          550          555          560
Leu Arg Glu Lys Ala Glu Tyr Leu Leu Arg Glu Trp Val Asn Leu Tyr
          565          570          575
His Ser Ala Ala Ala Gly Arg Asp Ser Thr Lys Ala Phe Ser Ala Phe
          580          585          590
Val Gly Gln Val Glu Leu Leu Glu Arg Lys Met His Gln Gln Gly Ile
          595          600          605
Leu Lys Thr Asp Asp Leu Ile Thr Arg Phe Phe Arg Leu Cys Thr Glu
          610          615          620
Met Cys Val Glu Ile Ser Tyr Arg Ala Gln Ala Glu Gln Gln His Asn
625          630          635          640
Pro Ala Ala Asn Pro Thr Met Ile Arg Ala Lys Cys Tyr His Asn Leu
          645          650          655
Asp Ala Phe Val Arg Leu Ile Ala Leu Leu Val Lys His Ser Gly Glu

```

660	665	670
Ala Thr Asn Thr Val Thr Lys Ile Asn Leu Leu Asn Lys Val Leu Gly		
675	680	685
Ile Val Val Gly Val Leu Leu Gln Asp His Asp Val Arg Gln Ser Glu		
690	695	700
Phe Gln Gln Leu Pro Tyr His Arg Ile Phe Ile Met Leu Leu Leu Glu		
705	710	715
Leu Asn Ala Pro Glu His Val Leu Glu Thr Ile Asn Phe Gln Thr Leu		
725	730	735
Thr Ala Phe Cys Asn Thr Phe His Ile Leu Arg Pro Thr Lys Ala Pro		
740	745	750
Gly Phe Val Tyr Ala Trp Leu Glu Leu Ile Ser His Arg Ile Phe Ile		
755	760	765
Ala Arg Met Leu Ala His Thr Pro Gln Gln Lys Gly Trp Pro Met Tyr		
770	775	780
Ala Gln Leu Leu Ile Asp Leu Phe Lys Tyr Leu Ala Pro Phe Leu Arg		
785	790	795
Asn Val Glu Leu Thr Lys Pro Met Gln Ile Leu Tyr Lys Gly Thr Leu		
805	810	815
Arg Val Leu Leu Val Leu Leu His Asp Phe Pro Glu Phe Leu Cys Asp		
820	825	830
Tyr His Tyr Gly Phe Cys Asp Val Ile Pro Pro Asn Cys Ile Gln Leu		
835	840	845
Arg Asn Leu Ile Leu Ser Ala Phe Pro Arg Asn Met Arg Leu Pro Asp		
850	855	860
Pro Phe Thr Pro Asn Leu Lys Val Asp Met Leu Ser Glu Ile Asn Ile		
865	870	875
Ala Pro Arg Ile Leu Thr Asn Phe Thr Gly Val Met Pro Pro Gln Phe		
885	890	895
Lys Lys Asp Leu Asp Ser Tyr Leu Lys Thr Arg Ser Pro Val Thr Phe		
900	905	910
Leu Ser Asp Leu Arg Ser Asn Leu Gln Val Ser Asn Glu Pro Gly Asn		
915	920	925
Arg Tyr Asn Leu Gln Leu Ile Asn Ala Leu Val Leu Tyr Val Gly Thr		
930	935	940
Gln Ala Ile Ala His Ile His Asn Lys Gly Ser Thr Pro Ser Met Ser		
945	950	955
Thr Ile Thr His Ser Ala His Met Asp Ile Phe Gln Asn Leu Ala Val		
965	970	975
Asp Leu Asp Thr Glu Gly Arg Tyr Leu Phe Leu Asn Ala Ile Ala Asn		
980	985	990
Gln Leu Arg Tyr Pro Asn Ser His Thr His Tyr Phe Ser Cys Thr Met		
995	1000	1005
Leu Tyr Leu Phe Ala Glu Ala Asn Thr Glu Ala Ile Gln Glu Gln Ile		
1010	1015	1020
Thr Arg Val Leu Leu Glu Arg Leu Ile Val Asn Arg Pro His Pro Trp		
1025	1030	1035
Gly Leu Leu Ile Thr Phe Ile Glu Leu Ile Lys Asn Pro Ala Phe Lys		
1045	1050	1055
Phe Trp Asn His Glu Phe Val His Cys Ala Pro Glu Ile Glu Lys Leu		
1060	1065	1070
Phe Gln Ser Val Ala Gln Cys Cys Met Gly Gln Lys Gln Ala Gln Gln		
1075	1080	1085
Val Met Glu Gly Thr Gly Ala Ser		

1090

1095

<210> 6035
 <211> 320
 <212> DNA
 <213> Homo sapiens

<400> 6035
 tgatcacaaa gtccttgctg agtctggggg ataggaaggg tctcaatcat ggtccatggg
 60
 taatctcttt gcccatgtga atgtgcccaa tgtatcaaag gctccattct aaatggcatg
 120
 gtggggcagt ggtgggcatt gtggctctgt gatctggggc aggtctccag ccacctggg
 180
 ggttccctgc tgggtcctg gaggacctgc ctcaaccctt ggatatgggg ttccacctga
 240
 cagcaggaaa agagatttga ggcctggagt ccaggcagga cagatggtag aaaccaatgg
 300
 agatgcatgg ccctggcgcc
 320

<210> 6036
 <211> 102
 <212> PRT
 <213> Homo sapiens

<400> 6036
 Met His Leu His Trp Phe Leu Pro Ser Val Leu Pro Gly Leu Gln Ala
 1 5 10 15
 Ser Asn Leu Phe Ser Cys Cys Gln Val Glu Pro His Ile Gln Gly Leu
 20 25 30
 Arg Gln Val Leu Gln Glu Pro Ser Arg Glu Pro Pro Gly Trp Leu Gly
 35 40 45
 Ala Trp Pro Arg Ser Gln Ser His Asn Ala His His Cys Pro Thr Met
 50 55 60
 Pro Phe Arg Met Glu Pro Leu Ile His Trp Ala His Ser His Gly Gln
 65 70 75 80
 Arg Asp Tyr Pro Trp Thr Met Ile Glu Thr Leu Pro Ile Pro Gln Thr
 85 90 95
 Gln Gln Gly Leu Cys Asp
 100

<210> 6037
 <211> 3910
 <212> DNA
 <213> Homo sapiens

<400> 6037
 aagcagccgn agcgtagctt ggctccggcc ctgctggcg ccctgtctat cacggcgctg
 60
 tgcactgccc tcgccgagcc cgctgggtg cacatccacg gaggcacctg ttcgcgcag
 120
 gagctggggg tctccgacgt gttgggctat gtgcaccgg acctgctgaa agatttctgc
 180

atgaatcccc agacagtget gtcctgcggt gtcacgcggt ccttctgttt cctgggcatt
240
ctgtgtagtc tctccgcttt ccttctggat gtctttgggc cgaagcatcc tgctctgaag
300
atcactcgtc gctatgcctt cgcctatctc ctaacgggtc tgcagtgtgc caccgtcatt
360
ggcttttctt attgggcttc tgaactcatc ttggcccagc agcagcagca taagaagtac
420
catggatccc aggtctatgt cacttcgcc gttagcttct acctggggc aggagctggt
480
ggagcctcaa tcttgccac ggcagccaac ctctgcgcc actacccac agaggaagag
540
gagcaggcgc tggagctgct ctcagagatg gaagagaacg agccctaccc ggcggaatat
600
gaggtcacca accagttcca gccacctcct gcttacacac cctaatacca gccctgggct
660
ctcttctctg gcagcccttc cctcaactct gcagctcttc tcgcaccagc aggagctcct
720
ttcccagca ggcctcactg gtaggatcct gaccatcttc tccaaacctt cccagggaga
780
gactctgcct ttagggctcat ccaagtatcc ctgctctcag aaccggaggt ccactggttt
840
tctataatgt actctttccc tctgcccaca tctgcccc ttcacattca cgagtcatta
900
ccagccaggg aaggctatcc aagtttcttc cagcatgggc gatattcttg ggaccgagac
960
tttcttgga gagctgtga gagcggacag tcccaaaaac aagtgtcaaa gggcccaagg
1020
gaaaggggac tgtgccctgg aggtcactt cacagggatc agtgtttgct ccacagctgt
1080
agctctgggc tgaagccccc cagacctt ccttctcgga gtgaccgcc cccagggcac
1140
ctgctccggg gagttctgtg cactttactc ttggacttc tctcacgtg tgccctgggt
1200
ttatggggag agggaatcgc tgttgggaag gcagagcagt tgcaacctc tctgcccttg
1260
cttcagtgtg ctggagccca ggcaaggaga gcaggagcca gcgtgagact gagggccct
1320
ggtgcctatc aaggaccaga gtgaagggga ctacatctcc cagcccttca ccttttaaat
1380
atgagtgggt ttaaaaggaa aaaaatgaaa ccaggcaaca gcaacaatat tctgttttta
1440
aaatagggac aagactgttg tcaactttta gacatgtatc ccattccttt tggtctgtca
1500
atatttgggg ctgtagctcc ttccaagccc atggtagtcc ctecccgagt ctctccagct
1560
agaatgcagc ctcccttccc tgccccttc cctctcagt acggtgactc cctggggcct
1620
tctcgtggaa cccagagggg ctgaggactg tggcctggct ggcgggccag cgtggtgtc
1680
ctcaggactg cagcactgag atggaacctg gcctcagttt aggaacaggg gccacaacag
1740
ggcaggaacc caccacctc cacataggaa tacaaccagt ggggccacat catgtgaggc
1800

atcagacca cactgtcagc ccagcaggcc gggctgtgtc cttcagacc agtgctgccc
1860
tagactctga ctccgggactc cagcttgcca cgtgccctct cccctcttga atgtactctg
1920
gtcttgca gtgctgtg gactttcttg ctcagccatc actctgggtca ccttgtttgc
1980
tctgggtctg gctgaatttt ctgccctgag atctgggcat aaagtggatg aaacttgaaa
2040
gaccttcagt gtagatccag atggccaacc tgtccttggt aagttacttg cttcttgga
2100
atcagtgtcc cctgctgagc tgaaaaggaa atggattcca atctcttcca acctttaagg
2160
tgatagatag tttgagcaag actggagaat ggacaacact atgaagctgt ggctagaaag
2220
ggactgtcat gtcccatcct ttggccagat tgactgggga tgccggaca gatgcctgca
2280
tgggtgtga gggccacatc tgcacacgag ccagtggctg cttgcagttc actgctgtga
2340
tgccagagtg tgttcaaagg tgactctcct gctcttcttg actcttctct caggcaagaa
2400
aggctgcagg ctgctgcta tgtgatgcct gagcacaag ccaaggaact gaactaagtc
2460
ttctgttaa gtccctgagt tgctattggc aggtttactt gtggccagct ctctctgccc
2520
ttgggtgtct gagcaggcag accagaagac caggcactgg acctgcatgc caaagggact
2580
ggcatctcc tgaggacctg tacatgacc cgtggactgt tccgcacgat ccggaaccca
2640
ctttttatc actcccatg tctttggcct tcctcttctt tctcttctcc tctgccatcc
2700
tgacactgat agtttgtcat ataaattccc cgggttgtgt tttttttct agaaaaaat
2760
taaaaggaa aacaaaacca aaaaaaccag aaaccacgaa taagaatgga aatgacaatg
2820
gctgcctgtt atttttctgt cacgatttcc ctgatttggc ttgttccctt tgtctcagag
2880
aagcaggaga tgttgatgag gctgtatttt tttttctttt tcttggtttt gagacaagag
2940
tctcgtctg tccccgggc tggagtgtaa cgtggcatga tctcagctca ctgcaacctc
3000
tgctcctgg gttcaagcga ttatcctgcc tcagcctcct gagtagctgg gattacaggc
3060
atgcccact atgccagat aatttttttg tatttttagt agagacaggg tttcaccatg
3120
ttggccaggc tggcttgga ctcctaacct caggttatcc acccaccttg gctcccaaa
3180
gtgctgggat tataggcatg aaccaccgtg cctggccaaa gatgtaattt aaaatagtta
3240
gaagggactt ggcattggcc agctccgtgc atggcatttt cccccaga gcttcctaat
3300
cctgttttca cacaggaagt ttctaggtct ttctagaaca gctagaaata gtagctgact
3360
cccgccaaag gcccaacctt caaacctga gctcttcagg ctgcacctc tggtaggcta
3420

tagaggagaa cgtggctcct aaactctagc catcctgtgg gaggaatatg acttctttgg
 3480
 gctgtggcctt gcagaacaaa ctacactttt tttccctcta ttgtttaaat tttatttaaat
 3540
 aatttgtgtg tttttctgtc tttattttct gtatttcacg tgttccttca ctccctagaa
 3600
 actgcacttt ctttgaaacc ataggtaatg aatcttacta ggagaggcat ggggatagag
 3660
 acagtctctg gagtgtgacc tgtaagcctc ctgtagggca gtgccaggcc ttgattgccc
 3720
 acgttctctc cgttccttct tccttcatac atttgatcac acagcctaca cccagccccg
 3780
 agtgtgcac acggtaaaag agctgagggc tctcttcagg gagcagccca tttaggtctc
 3840
 ttttgtgtt gttagggaga atacacatct ttcttgga aa aaaaaaaaaa aaaaaaaaaa
 3900
 aaaaaaaaaagg
 3910

<210> 6038

<211> 214

<212> PRT

<213> Homo sapiens

<400> 6038

Lys	Gln	Pro	Xaa	Arg	Ser	Leu	Ala	Pro	Ala	Leu	Pro	Gly	Ala	Leu	Ser
1				5				10					15		
Ile	Thr	Ala	Leu	Cys	Thr	Ala	Leu	Ala	Glu	Pro	Ala	Trp	Leu	His	Ile
		20					25					30			
His	Gly	Gly	Thr	Cys	Ser	Arg	Gln	Glu	Leu	Gly	Val	Ser	Asp	Val	Leu
	35						40				45				
Gly	Tyr	Val	His	Pro	Asp	Leu	Leu	Lys	Asp	Phe	Cys	Met	Asn	Pro	Gln
	50					55			60						
Thr	Val	Leu	Leu	Leu	Arg	Val	Ile	Ala	Ala	Phe	Cys	Phe	Leu	Gly	Ile
65					70				75					80	
Leu	Cys	Ser	Leu	Ser	Ala	Phe	Leu	Leu	Asp	Val	Phe	Gly	Pro	Lys	His
			85					90					95		
Pro	Ala	Leu	Lys	Ile	Thr	Arg	Arg	Tyr	Ala	Phe	Ala	His	Ile	Leu	Thr
	100						105					110			
Val	Leu	Gln	Cys	Ala	Thr	Val	Ile	Gly	Phe	Ser	Tyr	Trp	Ala	Ser	Glu
	115					120					125				
Leu	Ile	Leu	Ala	Gln	Gln	Gln	Gln	His	Lys	Lys	Tyr	His	Gly	Ser	Gln
	130				135				140						
Val	Tyr	Val	Thr	Phe	Ala	Val	Ser	Phe	Tyr	Leu	Val	Ala	Gly	Ala	Gly
145				150					155				160		
Gly	Ala	Ser	Ile	Leu	Ala	Thr	Ala	Ala	Asn	Leu	Leu	Arg	His	Tyr	Pro
			165					170				175			
Thr	Glu	Glu	Glu	Glu	Gln	Ala	Leu	Glu	Leu	Leu	Ser	Glu	Met	Glu	Glu
	180						185				190				
Asn	Glu	Pro	Tyr	Pro	Ala	Glu	Tyr	Glu	Val	Ile	Asn	Gln	Phe	Gln	Pro
	195					200					205				
Pro	Pro	Ala	Tyr	Thr	Pro										
210															

<210> 6039
 <211> 1130
 <212> DNA
 <213> Homo sapiens

<400> 6039
 nncggnntag ctatatttgtt tatccatgca gccgcgtggg cctcggaggg gctcctcgcg
 60
 gtgctgcgcg ccgggcccgg gccggaggcg ttactgcagg tctgggcggc cgaatcggcg
 120
 ctgcgtgggg agccattgtg ggcccagaat gtggtgcccc aggccgaagg ggaagacgat
 180
 ccggccggtg aggccaggc tgggaggcta cccctgctgc cctgcgcccg tgcctacgtg
 240
 agcccgcggg cgcccttcta ccggcctctg gctccggagc tgcgggcacg ccagctggag
 300
 ctgggcgcgc agcacgcgtt gctgctggac gctgctggcc aggtgttctc ctggggcggg
 360
 ggaggcatg gacagctggg ccatgggacc ctggaggcag agctggagcc acggctgttg
 420
 gaggcgttgc agggcctagt catggctgag gtggccgcgg ggggctggca ttctgtgtgt
 480
 gtgagtgaga ctggggatat ttatatctgg ggctggaatg aatcagggca gctggccctg
 540
 cccaccagga acctggcaga ggatggagag actgtcgcaa gggaagccac agaactgaat
 600
 gaagatgggt ctcaggtgaa gagaacgggt ggggctgagg atggagcccc tgcgcccttc
 660
 atagctgtcc agcccttccc ggcattactg gatctcccca tgggctcaga tgcagtcaag
 720
 gccagctgtg gatcccgcca cacagctgtg gtgacacgaa caggggagct ctacacctgg
 780
 ggctggggta aatatggaca gctgggccac gaggacacca ccagcttggg tggcctcgcg
 840
 cgtgtggaat actttgtaga taagcaactc caagtaaagg ctgtcacctg tgggccgtgg
 900
 aacacctacg tgtatgtgtt ggagaaaggg aagagctgac atgtgtacgt atatgtatat
 960
 gcaacacctg tgagaccccc attcaggtca aggaaaacca ttgcctgcac cccaagggcc
 1020
 ccataattgc ccctcccat cacagtctg cccttcaccc tcaagcacgg tcctaaactt
 1080
 gtctgcactt tagaaacacc tggagagcat tgaaaactct gctgcctaag
 1130

<210> 6040
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 6040
 Xaa Gly Leu Ala Ile Leu Phe Ile His Ala Ala Ala Trp Ala Ser Glu
 1 5 10 15
 Gly Leu Leu Ala Val Leu Arg Ala Gly Pro Gly Pro Glu Ala Leu Leu

```

      20      25      30
Gln Val Trp Ala Ala Glu Ser Ala Leu Arg Gly Glu Pro Leu Trp Ala
      35      40      45
Gln Asn Val Val Pro Glu Ala Glu Gly Glu Asp Asp Pro Ala Gly Glu
      50      55      60
Ala Gln Ala Gly Arg Leu Pro Leu Leu Pro Cys Ala Arg Ala Tyr Val
      65      70      75      80
Ser Pro Arg Ala Pro Phe Tyr Arg Pro Leu Ala Pro Glu Leu Arg Ala
      85      90      95
Arg Gln Leu Glu Leu Gly Ala Glu His Ala Leu Leu Leu Asp Ala Ala
      100      105      110
Gly Gln Val Phe Ser Trp Gly Gly Gly Arg His Gly Gln Leu Gly His
      115      120      125
Gly Thr Leu Glu Ala Glu Leu Glu Pro Arg Leu Leu Glu Ala Leu Gln
      130      135      140
Gly Leu Val Met Ala Glu Val Ala Ala Gly Gly Trp His Ser Val Cys
      145      150      155      160
Val Ser Glu Thr Gly Asp Ile Tyr Ile Trp Gly Trp Asn Glu Ser Gly
      165      170      175
Gln Leu Ala Leu Pro Thr Arg Asn Leu Ala Glu Asp Gly Glu Thr Val
      180      185      190
Ala Arg Glu Ala Thr Glu Leu Asn Glu Asp Gly Ser Gln Val Lys Arg
      195      200      205
Thr Gly Gly Ala Glu Asp Gly Ala Pro Ala Pro Phe Ile Ala Val Gln
      210      215      220
Pro Phe Pro Ala Leu Leu Asp Leu Pro Met Gly Ser Asp Ala Val Lys
      225      230      235      240
Ala Ser Cys Gly Ser Arg His Thr Ala Val Val Thr Arg Thr Gly Glu
      245      250      255
Leu Tyr Thr Trp Gly Trp Gly Lys Tyr Gly Gln Leu Gly His Glu Asp
      260      265      270
Thr Thr Ser Leu Asp Arg Pro Arg Arg Val Glu Tyr Phe Val Asp Lys
      275      280      285
Gln Leu Gln Val Lys Ala Val Thr Cys Gly Pro Trp Asn Thr Tyr Val
      290      295      300
Tyr Ala Val Glu Lys Gly Lys Ser
      305      310

```

<210> 6041
 <211> 291
 <212> DNA
 <213> Homo sapiens

<400> 6041
 acgcgtgaag gggaagaaag agaacgtctg caaaaggagg aagagaaacg taggagagaa
 60
 gaagaggaaa ggcttcgacg ggaggaagag gaaaggagac ggatagaaga agaaaggctt
 120
 cggttgagc agcaaaagca gcagataatg gcagctttaa actcccagac tgccgtgcag
 180
 ttccagcagt atgcagccca acagtatcca gggaactacg aacagcagca aattctcatc
 240
 cgccagttgc aggagcaaca ctatcagcag tacatgcagc agttgtatca c
 291

<210> 6042

<211> 97

<212> PRT

<213> Homo sapiens

<400> 6042

```

Thr Arg Glu Gly Glu Glu Arg Glu Arg Leu Gln Lys Glu Glu Glu Lys
 1             5             10             15
Arg Arg Arg Glu Glu Glu Glu Arg Leu Arg Arg Glu Glu Glu Glu Arg
      20             25             30
Arg Arg Ile Glu Glu Glu Arg Leu Arg Leu Glu Gln Gln Lys Gln Gln
      35             40             45
Ile Met Ala Ala Leu Asn Ser Gln Thr Ala Val Gln Phe Gln Gln Tyr
      50             55             60
Ala Ala Gln Gln Tyr Pro Gly Asn Tyr Glu Gln Gln Gln Ile Leu Ile
65             70             75             80
Arg Gln Leu Gln Glu Gln His Tyr Gln Gln Tyr Met Gln Gln Leu Tyr
      85             90             95
His

```

<210> 6043

<211> 558

<212> DNA

<213> Homo sapiens

<400> 6043

```

tttttttttt tttttttttt tttgacattc aaacacaagc ttttaatagga gatatcaagg
60
cacagggtgg agggaggggg ttgctccagg gaattctgaa tgtcccagtt catgcagaag
120
ttcaagggtgt cttgtacaac ccaactgggga aacaggatct gggaccggtg cgggcacatt
180
ctcctggccc agcacagggg cgggtgccacc cacattcggc ccgggtcttg cctaatacat
240
gttttggtaa acaactcggtc agagcaccct ctgttttttc cagtcccga gctccccgca
300
ggaatccaca cccccgccc acccctctcg ggacacggat tcaatgtccc tgggtgggtca
360
tctggccttt tcggcctgtg atgtgattcg agcgggtgcta tctttaacct cgggcagggg
420
tgttttcccc cgtcgacgtt gctcagataa cagtctgca attccatggg ggtggcggca
480
cccggggtct ggcaaagcat aggggcctgc ttgtgtcccc tgctgctgcc ccaagtagtc
540
agaggaggat gtgaattc
558

```

<210> 6044

<211> 152

<212> PRT

<213> Homo sapiens

<400> 6044

```

Met Leu Cys Gln Thr Pro Gly Ala Ala Thr Pro Met Glu Leu Gln Asp
 1           5           10           15
Cys Tyr Leu Ser Asn Val Asp Gly Gly Glu His Pro Cys Pro Arg Leu
      20           25           30
Lys Ile Ala Pro Leu Glu Ser His His Arg Pro Lys Arg Pro Asp Asp
      35           40           45
Pro Pro Gly Thr Leu Asn Pro Cys Pro Glu Arg Gly Gly Ala Gly Val
      50           55           60
Trp Ile Pro Ala Gly Ser Phe Gly Thr Gly Lys Asn Arg Gly Cys Ser
      65           70           75           80
Asp Arg Val Phe Thr Lys Thr Cys Ile Arg Gln Asp Pro Gly Arg Met
      85           90           95
Trp Val Ala Pro Pro Leu Cys Trp Ala Arg Arg Met Cys Pro His Arg
      100          105          110
Ser Gln Ile Leu Phe Pro Gln Trp Val Val Gln Asp Thr Leu Asn Phe
      115          120          125
Cys Met Asn Trp Asp Ile Gln Asn Ser Leu Glu Gln Pro Pro Pro Ser
      130          135          140
Thr Leu Cys Leu Asp Ile Ser Tyr
145           150

```

<210> 6045

<211> 1916

<212> DNA

<213> Homo sapiens

<400> 6045

```

acgcgtgtcg agacgcactt ccagcccccgc gccgctggcg aaggtggccc ctacggctgc
60
aaggacgctc tgcgccagca gctccgctcg gcgagagagg tgattgcagt ggtcatggac
120
gtgttcacag acatcgacat ctccagagac ctgcaagaaa tatgcaggaa acagggagtt
180
gctgtgtata tccttctgga ccaggctctc ctctctcaat ttctggatat gtgcatggat
240
ctgaaagtgc atcctgaaca ggaaaagtta atgacagttc ggactatcac aggaaatata
300
tactatgcaa ggtcaggaac taagattatt ggaaggttc acgaaaagt caggttgatt
360
gatggcatcc gcgtggcaac aggtcctac agttttacat ggacggatgg caaattaaac
420
agcagtaact tggttaattct gtctggccaa gtggttgaac actttgatct ggagttccga
480
atcctgtatg ccagtcctaa gcccatcagc cccaaactcc tgtctcactt ccagagcagc
540
aacaagtgtg atcacctcac caaccgaaaa ccacagtcca aggagctcac cctgggcaac
600
ctgctgcgga tgcggctggc taggctgtca agtactccca ggaaggcgga cctggacca
660
gagatgcccg cagagggcaa ggcagagcgc aagccccatg actgtgagtc ctctactgtt
720
agtgagggaag actacttcag cagccacagg gacgagctcc agagcagaaa ggccattgac
780

```

gctgccactc aaacagagcc aggagaggag atgccagggc tgagtgtgag tgagggtggga
 840
 acacaaacca gcatcaccac agcatgtgct ggtacccaga ctgcagtcac caccaggata
 900
 gcaagctctc aaaccacgat ttgggtccaga tcgaccacta ctccagactga catggatgag
 960
 aacattctct ttcctcgagg aactcaatct acagaagggc caccagtctc aaaaatgtct
 1020
 gtatcgagat cttccagttt gaagtcttcc tctctgtgt cttcccaagg ctctgtggca
 1080
 agtccactg gttctccgc ttcctcaga accactgact tccacaatcc tggctatccc
 1140
 aagtacctg gcacccccca cctggaactg tacttgagtg actcacttag aaacttgaac
 1200
 aaagagcggc aattccactt cgctggtatc aggtcccgcc tcaaccacat gctggctatg
 1260
 ctgtcaagga gaacactctt tactgaaaac caccttgccc ttcattctgg caatttcagc
 1320
 agagttaatt tgcttctgt tagagatgta gcactttatc cttcctatca gtaactgtc
 1380
 cgtgttcaga ctcttggttt cttccaggct tacagtggac atcatcagct tctgtctta
 1440
 aaaaatatct tatgtcccta attgccttcc ttttacctga ctttgcacc tttgtgtct
 1500
 ttgaattctt taggtgcat attattttac atgctttgtt ttgtcatgta tataccagg
 1560
 attggtttta tggtttaaac actatggata caggggtttg ttttgcacaa ttttaatagt
 1620
 catgcactac ataatgatgt tttggtcaat gacagaccac gtatatgttg gcagtctcat
 1680
 aagattataa tactgtattt ttactatacc ttttctgtgt ttagatacaa ataccattat
 1740
 gttacagttg cctacagtat tcagtgcagt aacatgatgt acaggtttgt agcctgtttt
 1800
 gcatttttct taggttgat gctcttctgt tttaaagggt tgaatcacca gcattttgt
 1860
 gatcaaaatc ctatttagaa aaaataaaac tactttctgt ttaaaaaaaaa aacaaa
 1916

<210> 6046

<211> 457

<212> PRT

<213> Homo sapiens

<400> 6046

Thr	Arg	Val	Glu	Thr	His	Phe	Gln	Pro	Arg	Gly	Ala	Gly	Glu	Gly	Gly
1				5					10					15	
Pro	Tyr	Gly	Cys	Lys	Asp	Ala	Leu	Arg	Gln	Gln	Leu	Arg	Ser	Ala	Arg
			20					25					30		
Glu	Val	Ile	Ala	Val	Val	Met	Asp	Val	Phe	Thr	Asp	Ile	Asp	Ile	Phe
		35				40					45				
Arg	Asp	Leu	Gln	Glu	Ile	Cys	Arg	Lys	Gln	Gly	Val	Ala	Val	Tyr	Ile
	50				55					60					
Leu	Leu	Asp	Gln	Ala	Leu	Leu	Ser	Gln	Phe	Leu	Asp	Met	Cys	Met	Asp

```

65          70          75          80
Leu Lys Val His Pro Glu Gln Glu Lys Leu Met Thr Val Arg Thr Ile
      85          90          95
Thr Gly Asn Ile Tyr Tyr Ala Arg Ser Gly Thr Lys Ile Ile Gly Lys
      100        105        110
Val His Glu Lys Phe Thr Leu Ile Asp Gly Ile Arg Val Ala Thr Gly
      115        120        125
Ser Tyr Ser Phe Thr Trp Thr Asp Gly Lys Leu Asn Ser Ser Asn Leu
      130        135        140
Val Ile Leu Ser Gly Gln Val Val Glu His Phe Asp Leu Glu Phe Arg
      145        150        155        160
Ile Leu Tyr Ala Gln Ser Lys Pro Ile Ser Pro Lys Leu Leu Ser His
      165        170        175
Phe Gln Ser Ser Asn Lys Phe Asp His Leu Thr Asn Arg Lys Pro Gln
      180        185        190
Ser Lys Glu Leu Thr Leu Gly Asn Leu Leu Arg Met Arg Leu Ala Arg
      195        200        205
Leu Ser Ser Thr Pro Arg Lys Ala Asp Leu Asp Pro Glu Met Pro Ala
      210        215        220
Glu Gly Lys Ala Glu Arg Lys Pro His Asp Cys Glu Ser Ser Thr Val
      225        230        235        240
Ser Glu Glu Asp Tyr Phe Ser Ser His Arg Asp Glu Leu Gln Ser Arg
      245        250        255
Lys Ala Ile Asp Ala Ala Thr Gln Thr Glu Pro Gly Glu Glu Met Pro
      260        265        270
Gly Leu Ser Val Ser Glu Val Gly Thr Gln Thr Ser Ile Thr Thr Ala
      275        280        285
Cys Ala Gly Thr Gln Thr Ala Val Ile Thr Arg Ile Ala Ser Ser Gln
      290        295        300
Thr Thr Ile Trp Ser Arg Ser Thr Thr Thr Gln Thr Asp Met Asp Glu
      305        310        315        320
Asn Ile Leu Phe Pro Arg Gly Thr Gln Ser Thr Glu Gly Ser Pro Val
      325        330        335
Ser Lys Met Ser Val Ser Arg Ser Ser Ser Leu Lys Ser Ser Ser Ser
      340        345        350
Val Ser Ser Gln Gly Ser Val Ala Ser Ser Thr Gly Ser Pro Ala Ser
      355        360        365
Ile Arg Thr Thr Asp Phe His Asn Pro Gly Tyr Pro Lys Tyr Leu Gly
      370        375        380
Thr Pro His Leu Glu Leu Tyr Leu Ser Asp Ser Leu Arg Asn Leu Asn
      385        390        395        400
Lys Glu Arg Gln Phe His Phe Ala Gly Ile Arg Ser Arg Leu Asn His
      405        410        415
Met Leu Ala Met Leu Ser Arg Arg Thr Leu Phe Thr Glu Asn His Leu
      420        425        430
Gly Leu His Ser Gly Asn Phe Ser Arg Val Asn Leu Leu Ala Val Arg
      435        440        445
Asp Val Ala Leu Tyr Pro Ser Tyr Gln
      450        455

```

<210> 6047

<211> 773

<212> DNA

<213> Homo sapiens

<400> 6047

ggatcctgac ccccagactt gcgccctctg ggccctccat tcagtcccg ggcgacagcg
 60
 ccaccgtgtg gccacagcgt ctcctagcgg cctccttacc taggggtcgg gtgagctcct
 120
 gatgggaaat gggggatctc atcgcttggt agtagaggag actttggggg gaaagtgatg
 180
 gaggatgggg caagggatcc ggtgtccaac tctgtgtgtc cctgcagctc ccgtagccca
 240
 gcagggaaga tgaccttctg gccctaagc aggcggaagg caggtggcgg ccgccggagc
 300
 aatggtgcaa acagctcttc tccagtgtgg tccccgtgct gctggggggac ccagaggagg
 360
 agccgggtgg gcggcagctc ctggacctca attgcttttt gtccgacatc tcggacactc
 420
 tcttcacat gactcagtc gccctctcgc cctgcagct gccgcctgag gatgcctacg
 480
 tcggcaatgc tgacatgac cagccggacc tgacgccact gcagccaagc ctggatgact
 540
 tcatggacat ctgagatttc ttaccaact ccgcctccc acagccgccc atgccttcaa
 600
 acttcccaga gcccccaac ttcagcccc tggttgactc cctcttcagc agtgggaccc
 660
 tgggcccaga ggtgccccg gcttctctgg ccatgaccca cctctctgga cacagccgct
 720
 tgcaggctcg gaacagctgc cctgcccctg tgctgtctac taaatgaatt gcg
 773

<210> 6048

<211> 129

<212> PRT

<213> Homo sapiens

<400> 6048

Met	Val	Lys	Arg	Val	Ser	Glu	Met	Ser	Asp	Lys	Lys	Gln	Leu	Arg	Ser
1				5				10					15		
Arg	Ser	Cys	Arg	Pro	Pro	Gly	Ser	Ser	Ser	Gly	Ser	Pro	Ser	Ser	Thr
			20				25					30			
Gly	Thr	Thr	Leu	Glu	Lys	Ser	Cys	Leu	His	His	Cys	Ser	Gly	Gly	Gly
		35				40					45				
His	Leu	Pro	Ser	Ala	Cys	Leu	Gly	Ala	Arg	Arg	Ser	Ser	Ser	Leu	Leu
	50				55			60							
Gly	Tyr	Gly	Ser	Cys	Arg	Asp	Thr	Gln	Ser	Trp	Thr	Pro	Asp	Pro	Leu
65				70				75				80			
Pro	His	Pro	Pro	Ser	Leu	Ser	Pro	Gln	Ser	Leu	Leu	Tyr	Ser	Gln	Ala
			85				90					95			
Met	Arg	Ser	Pro	Ile	Ser	His	Gln	Glu	Leu	Thr	Arg	Pro	Leu	Gly	Lys
			100				105					110			
Glu	Ala	Ala	Arg	Arg	Arg	Cys	Gly	His	Thr	Val	Ala	Leu	Ser	Ala	Arg
		115				120						125			

Asp

<210> 6049
 <211> 479
 <212> DNA
 <213> Homo sapiens

<400> 6049
 accgggttttt cttccccag tccctcagct gctgctgctg ctcaggaggt cagatctgcc
 60
 actgatggta ataccagcac cactccgccc acctctgcca agaagagaaa gttaaacagc
 120
 agcagcagta gcagcagtaa cagtagtaac gagagagaag actttgattc cacctcttcc
 180
 tcctcttcca ctctctcttt acaaccagg gattcggcac ccccttcaac ctggtccttc
 240
 tgctggggg tttcagtggc tgcttcagc cacgtaccga tacagaagaa gctgcgtttt
 300
 gaagacaccc tggagtttgt agggtttgat gcgaagatgg ctgaggaatc ctctctctcc
 360
 tcctcctcat cttcaccaac tgctgcaaca tctcaggagc agcaacttaa aaataagagt
 420
 atattaatct cttctgtggg ttcggtgcat catgcagacg ggctagccga atcttctac
 479

<210> 6050
 <211> 159
 <212> PRT
 <213> Homo sapiens

<400> 6050
 Thr Gly Phe Ser Ser Pro Ser Pro Ser Ala Ala Ala Ala Gln Glu
 1 5 10 15
 Val Arg Ser Ala Thr Asp Gly Asn Thr Ser Thr Thr Pro Pro Thr Ser
 20 25 30
 Ala Lys Lys Arg Lys Leu Asn Ser Ser Ser Ser Ser Ser Ser Asn Ser
 35 40 45
 Ser Asn Glu Arg Glu Asp Phe Asp Ser Thr Ser Ser Ser Ser Thr
 50 55 60
 Pro Pro Leu Gln Pro Arg Asp Ser Ala Ser Pro Ser Thr Ser Ser Phe
 65 70 75 80
 Cys Leu Gly Val Ser Val Ala Ala Ser Ser His Val Pro Ile Gln Lys
 85 90 95
 Lys Leu Arg Phe Glu Asp Thr Leu Glu Phe Val Gly Phe Asp Ala Lys
 100 105 110
 Met Ala Glu Glu Ser Ser Ser Ser Ser Ser Ser Ser Ser Pro Thr Ala
 115 120 125
 Ala Thr Ser Gln Glu Gln Gln Leu Lys Asn Lys Ser Ile Leu Ile Ser
 130 135 140
 Ser Val Gly Ser Val His Ala Asp Gly Leu Ala Glu Ser Ser
 145 150 155

<210> 6051
 <211> 2404
 <212> DNA
 <213> Homo sapiens

<400> 6051
attaacaatg gaagtataa aggaaatcag caagagaaag aaaggctctgt ggattttaa
60
tttcttccat cgggtgatcc tgaacagtt cttcagacag ggcataaatt gttgtccgaa
120
ttacagcagc gtcgatttaa tggctcagac ggagggggtt catggctctcc tatggatgat
180
gaacttcttg cacagccaca ggttatgaaa ttattagatt cactccgaga gcaatatacc
240
cgctaccagg aagttttagt gcaacgtagc aagcgcacac agttagaaga gattcaacag
300
aaggtaatgc aggtgggtgaa ctggctagaa gggcctggat cagaacaact aagagcccag
360
tggggcattg gagaactccat tagggcctcc caggccctac agcagaaaca cgaagagatt
420
gagagccagc acagtgaatg gtttgagtg tatgtggaac ttaacagca aattgcagca
480
ctcttgaatg ctggcgatga ggaagatctt gtggaactaa agtcactgca gcaacaactt
540
agtgatgttt gttatcgaca ggccagtcag ctggaattta ggcaaaatct cttacaagca
600
gctcttgaat ttcattggtg tgcccaagat ttgtctcagc agttggatgg cttattaggg
660
atgttgtgct tagatgtagc accagctgat ggagcatcga ttcagcaaac tttaaaactg
720
cttgaagaga agctgaaaag tgttgatgtg ggattgcaag gtttgctgta aaaagggtcaa
780
ggctctcctg atcagatctc caatcaggca tccnntgggc ctatggaaag gatgntaacc
840
attgaaaata aagaaaatgt ggaccacata caaggagtga tggaagatat gcagcttaga
900
aaacaaagat gtgaagacat ggtagatgtg cgaagggttaa agatgcttca gatggtgcag
960
ttgtttaaat gtgaagaaga tgctgccaag gcagtagaat ggctaagtga acttctggat
1020
gctctgctta agactcacat cagattgggc gatgatgctc aagaaacgaa agttttgctg
1080
gaaaagcata gaaaatttgt tgatgttgca cagagcactt atgactatgg caggcagttg
1140
ctacaggcca cagttgtgtt atgccagtct ttgcgctgca cttctcggtc atctggggat
1200
acacttctc gactgaacag agtatggaaa caatttaca tagcatctga agagagagta
1260
catagattgg aaatggctat tgcatttcac tcaaatgctg aaaagatttt gcaggactgt
1320
ccagaagagc ctgaagctat taatgatgag gagcaatttg atgaaattga agcagttggg
1380
aaatcacttt tggatagatt aactgttcca gtagtttctc ctgatggaac cgaacaatat
1440
tttgggagtc caagtacat ggcttctact gcagaaaaca tcagagacag gatgaaacta
1500
gttaacttca aaaggcagca gctgagacat cctgaaatgg tgaccacaga gagctaata
1560

ctaccagcta cctacagatt tgcagttcat aatcccgcat gttgtcaaca tactacagca
 1620
 ttagccacca caccttaaga tgcatttcac agccaaaata agtctcattt cttttcatga
 1680
 cacatttctc ttacatggtt aacacettgc tactaccaag gcataattac ttaacatgct
 1740
 tcgaggctgt agattccaag tatcttaaaa gaaggaacta taaacattgc actgaaaact
 1800
 tgcttttaaag ctttacctga cctgtcagtt ttagacaaa caactgataa taagctttga
 1860
 atggtgctaa taagagtagg aattctctct attaaaaaga aaaaaaaaag ttgcccttcc
 1920
 tccacagggtg atttagtaaa tttagacagt agttaaactc ttgttagtag acagtgggtg
 1980
 cctcaaaatt ttactttgta attcttcaga attgattatt tttattgtgt caatacagag
 2040
 aaagccttcc agatctttga tatatcatag tcattaaaag accttttctt atttgtattg
 2100
 ataatgtatt aaaagttggt tgtgcttaat aaaagacttc tttaaacatc ttatttaatt
 2160
 tagtagttac atcctatttc caaacatgag tgccttattt aaaagggcat tcttaggact
 2220
 gtgaggatgg tttaatattt gttttttcat ggtgggtgca tgtatttttag acaggaaaata
 2280
 catatgtaag catgtgtata taataaataa gcatgtttta tcatgaaaaa ttattgtgaa
 2340
 caatttagat ctttaagaac ttattaataa tgggaatacta tttctaattg ttctcttttt
 2400
 caac
 2404

<210> 6052

<211> 518

<212> PRT

<213> Homo sapiens

<400> 6052

Ile	Asn	Asn	Gly	Ser	Asp	Lys	Gly	Asn	Gln	Gln	Glu	Lys	Glu	Arg	Ser
1				5				10						15	
Val	Asp	Leu	Asn	Phe	Leu	Pro	Ser	Val	Asp	Pro	Glu	Thr	Val	Leu	Gln
		20					25						30		
Thr	Gly	His	Glu	Leu	Leu	Ser	Glu	Leu	Gln	Gln	Arg	Arg	Phe	Asn	Gly
		35					40					45			
Ser	Asp	Gly	Gly	Val	Ser	Trp	Ser	Pro	Met	Asp	Asp	Glu	Leu	Leu	Ala
	50					55				60					
Gln	Pro	Gln	Val	Met	Lys	Leu	Leu	Asp	Ser	Leu	Arg	Glu	Gln	Tyr	Thr
65				70					75					80	
Arg	Tyr	Gln	Glu	Val	Cys	Arg	Gln	Arg	Ser	Lys	Arg	Thr	Gln	Leu	Glu
			85					90					95		
Glu	Ile	Gln	Gln	Lys	Val	Met	Gln	Val	Val	Asn	Trp	Leu	Glu	Gly	Pro
		100					105					110			
Gly	Ser	Glu	Gln	Leu	Arg	Ala	Gln	Trp	Gly	Ile	Gly	Asp	Ser	Ile	Arg
	115					120					125				
Ala	Ser	Gln	Ala	Leu	Gln	Gln	Lys	His	Glu	Glu	Ile	Glu	Ser	Gln	His

130						135						140					
Ser	Glu	Trp	Phe	Ala	Val	Tyr	Val	Glu	Leu	Asn	Gln	Gln	Ile	Ala	Ala		
145	150					155					160						
Leu	Leu	Asn	Ala	Gly	Asp	Glu	Glu	Asp	Leu	Val	Glu	Leu	Lys	Ser	Leu		
165					170					175							
Gln	Gln	Gln	Leu	Ser	Asp	Val	Cys	Tyr	Arg	Gln	Ala	Ser	Gln	Leu	Glu		
180					185					190							
Phe	Arg	Gln	Asn	Leu	Leu	Gln	Ala	Ala	Leu	Glu	Phe	His	Gly	Val	Ala		
195					200					205							
Gln	Asp	Leu	Ser	Gln	Gln	Leu	Asp	Gly	Leu	Leu	Gly	Met	Leu	Cys	Val		
210					215					220							
Asp	Val	Ala	Pro	Ala	Asp	Gly	Ala	Ser	Ile	Gln	Gln	Thr	Leu	Lys	Leu		
225	230					235					240						
Leu	Glu	Glu	Lys	Leu	Lys	Ser	Val	Asp	Val	Gly	Leu	Gln	Gly	Leu	Arg		
245					250					255							
Glu	Lys	Gly	Gln	Gly	Leu	Leu	Asp	Gln	Ile	Ser	Asn	Gln	Ala	Ser	Xaa		
260					265					270							
Gly	Pro	Met	Glu	Arg	Met	Xaa	Thr	Ile	Glu	Asn	Lys	Glu	Asn	Val	Asp		
275					280					285							
His	Ile	Gln	Gly	Val	Met	Glu	Asp	Met	Gln	Leu	Arg	Lys	Gln	Arg	Cys		
290					295					300							
Glu	Asp	Met	Val	Asp	Val	Arg	Arg	Leu	Lys	Met	Leu	Gln	Met	Val	Gln		
305	310					315					320						
Leu	Phe	Lys	Cys	Glu	Glu	Asp	Ala	Ala	Lys	Ala	Val	Glu	Trp	Leu	Ser		
325					330					335							
Glu	Leu	Leu	Asp	Ala	Leu	Leu	Lys	Thr	His	Ile	Arg	Leu	Gly	Asp	Asp		
340					345					350							
Ala	Gln	Glu	Thr	Lys	Val	Leu	Leu	Glu	Lys	His	Arg	Lys	Phe	Val	Asp		
355					360					365							
Val	Ala	Gln	Ser	Thr	Tyr	Asp	Tyr	Gly	Arg	Gln	Leu	Leu	Gln	Ala	Thr		
370					375					380							
Val	Val	Leu	Cys	Gln	Ser	Leu	Arg	Cys	Thr	Ser	Arg	Ser	Ser	Gly	Asp		
385	390					395					400						
Thr	Leu	Pro	Arg	Leu	Asn	Arg	Val	Trp	Lys	Gln	Phe	Thr	Ile	Ala	Ser		
405					410					415							
Glu	Glu	Arg	Val	His	Arg	Leu	Glu	Met	Ala	Ile	Ala	Phe	His	Ser	Asn		
420					425					430							
Ala	Glu	Lys	Ile	Leu	Gln	Asp	Cys	Pro	Glu	Glu	Pro	Glu	Ala	Ile	Asn		
435					440					445							
Asp	Glu	Glu	Gln	Phe	Asp	Glu	Ile	Glu	Ala	Val	Gly	Lys	Ser	Leu	Leu		
450					455					460							
Asp	Arg	Leu	Thr	Val	Pro	Val	Val	Tyr	Pro	Asp	Gly	Thr	Glu	Gln	Tyr		
465	470					475					480						
Phe	Gly	Ser	Pro	Ser	Asp	Met	Ala	Ser	Thr	Ala	Glu	Asn	Ile	Arg	Asp		
485					490					495							
Arg	Met	Lys	Leu	Val	Asn	Leu	Lys	Arg	Gln	Gln	Leu	Arg	His	Pro	Glu		
500					505					510							
Met	Val	Thr	Thr	Glu	Ser												
515																	

<210> 6053

<211> 3257

<212> DNA

<213> Homo sapiens

<400> 6053

nngggccctc tgcaggagg agacagcctc cgggcccggg gaggacaagt cgctgccacc
60
tttggctgcc gacgtgattc cctgggacgg tccgtttcct gccgtcagct gccggccgag
120
ttgggtctcc gtggttcagg ccggtccccc cttcctggtc tcccttctcc cgctgggccc
180
gtttatcggg aggagattgt cttccagggc tagcaattgg acttttgatg atgtttgacc
240
cagcggcagg aatagcaggc aacgtgattt caaagctggg ctcagcctct gtttcttctc
300
tcgtgtaatc gcaaaaccca ttttgagca ggaattccaa tcatgtctgt gatggtggtg
360
agaaagaagg tgacacggaa atgggagaaa cttccaggca ggaacacctt ttgctgtgat
420
ggccgcgtca tgatggcccg gcaaaagggc attttctacc tgaccctttt cctcatcctg
480
gggacatgta cactcttctt cgcctttgag tgccgctacc tggctgttca gctgtctctc
540
gccatcctg tatttgctgc catgctcttc ctttctcca tggctacact gttgaggacc
600
agcttcagt accctggagt gattcctcgg gcgctaccag atgaagcagc tttcatagaa
660
atggagatag aagctaccaa tgggtcgggtg ccccgaggcc agagaccacc gcctcgtatc
720
aagaatttcc agataacaa ccagattgtg aaactgaaat actgttacac atgcaagatc
780
ttccggcctc cccgggcctc ccattgcagc atctgtgaca actgtgtgga gcgcttcgac
840
catcactgcc cctgggtggg gaattgtgtt ggaaagagga actaccgcta cttctacctc
900
ttcatcctt ctctctccct cctcacaatc tatgtcttcg cttcaacat cgtctatgtg
960
gccctcaaat ctttgaaaat tggcttcttg gagacattga aagaaactcc tggaaactgt
1020
ctagaagtcc tcatttgctt ctttacctc tggtcgctg tgggactgac tggatttcat
1080
actttcctcg tggctctcaa ccagacaacc aatgaagaca tcaaaggatc atggacaggg
1140
aagaatcgcg tccagaatcc ctacagccat ggcaatattg tgaagaactg ctgtgaagtg
1200
ctgtgtggcc ccttgcctcc cagtgtgctg gategaaggg gtattttgcc actggaggaa
1260
agtggaagtc gacctccag tactcaagag accagtagca gcctcttgcc acagagccca
1320
gccccacag aacacctgaa ctcaaatgag atgccggagg acagcagcac tcccgaagag
1380
atgccacctc cagagccccc agagccacca caggaggcag ctgaagctga gaagtagcct
1440
atctatggaa gagacttttg tttgtgttta attagggcta tgagagattt caggtgagaa
1500
gttaaacctg agacagagag caagtaagct gtccctttta actgtttttc tttggtcttt
1560

agtcacccag ttgcacactg gcattttctt gctgcaagct tttttaaaatt tctgaactca
1620
aggcagtggc agaagatgtc agtcacctct gataactgga aaaatgggtc tcttggggccc
1680
tggcactggg tctccatggc ctcagccaca gggteccctt ggaccccccctc tcttccctcc
1740
agatcccagc cctcctgctt ggggtcactg gtctcattct ggggctaaaa gtttttgaga
1800
ctgggtcaaa tccctccaag ctgctgcacg tgctgagtc agaggcagtc acagagacct
1860
ctggccaggg gatecctaact gggttcttgg ggtcttcagg actgaagagg agggagagtg
1920
gggtcagaag atttctctgg ccaccaagtg ccagcattgc ccacaaatcc ttttaggaat
1980
gggacaggta ccttccactt gttgtattta ttagtgtagc ttctcctttg tctcccatcc
2040
actctgacac ctaagcccca ctcttttccc attagatata tgtaagtagt tgtagtagag
2100
ataataattg acatttctcg tagactaccc agaaactttt ttaataacctg tgccattctc
2160
aataagaatt tatgagatgc cagcggcata gcccttcaca ctctctgtct catctctctc
2220
cctttctcat tagccctttt taatttgttt ttcttttga ctctgctcc cattaggagc
2280
aggaatggca gtaataaaag tctgcacttt ggtcatttct ttctctcaga ggaagcctga
2340
gtgctcactt aaacactatc ccctcagact ccctgtgtga ggctgcaga ggccctgaat
2400
gcacaaatgg gaaaccaagg cacagagagg ctctcctctc ctctcctctc ccccgatgta
2460
ccctcaaaaa aaaaaaaaaat gctaaccagt tcttccatta agcctcggct gagtgagggg
2520
aagcccagca ctgctgccct ctcggttaac tcaccctaag gcctcggccc acctctggct
2580
atggtaacca cactgggggc ttcttccaag ccccgctctt ccagcacttc caccggcaga
2640
gtcccagagc cacttcaccc tgggggtggg ctgtggcccc cagtcagctc tgctcaggac
2700
ctgctctatt tcagggaaga agatttatgt attatatgtg gctatatctc ctagagcacc
2760
tgtgttttcc tctttctaag ccagggtcct gtctggatga cttatgcggg gggggagtgt
2820
aaaccggaac ttttcatcta tttgaaggcg attaaactgt gtctaatagca aacttctctg
2880
ctctccttc ccccttccat ttcaagaata tgtttggtg taggggtggg gtgggggttg
2940
gaagggggtg cttgttactc cccaaacttc cattaaccag ggcacccttg ggttgagag
3000
gtagtccaa actctccatt gatctatact acattctggg ctgaaggttt tcttattctg
3060
gactatgaag aaaggacttt caaggagata tagtgtgaac aggatcagga aggtagaggg
3120
attatattta cttaagagaa caagctctat attaggatat tgttttgaag cagatggatg
3180

ccgtaattg ctaataagtc ttagttatta acgcaggctc atcagggccc ccccttgggg

3240

aaatatttga tcagtgg

3257

<210> 6054

<211> 382

<212> PRT

<213> Homo sapiens

<400> 6054

Leu	Phe	Leu	Leu	Ser	Cys	Asn	Arg	Lys	Thr	His	Phe	Gly	Ala	Gly	Ile
1				5					10					15	
Pro	Ile	Met	Ser	Val	Met	Val	Val	Arg	Lys	Lys	Val	Thr	Arg	Lys	Trp
			20					25					30		
Glu	Lys	Leu	Pro	Gly	Arg	Asn	Thr	Phe	Cys	Cys	Asp	Gly	Arg	Val	Met
		35				40					45				
Met	Ala	Arg	Gln	Lys	Gly	Ile	Phe	Tyr	Leu	Thr	Leu	Phe	Leu	Ile	Leu
	50					55					60				
Gly	Thr	Cys	Thr	Leu	Phe	Phe	Ala	Phe	Glu	Cys	Arg	Tyr	Leu	Ala	Val
65				70					75					80	
Gln	Leu	Ser	Pro	Ala	Ile	Pro	Val	Phe	Ala	Ala	Met	Leu	Phe	Leu	Phe
			85					90					95		
Ser	Met	Ala	Thr	Leu	Leu	Arg	Thr	Ser	Phe	Ser	Asp	Pro	Gly	Val	Ile
			100					105					110		
Pro	Arg	Ala	Leu	Pro	Asp	Glu	Ala	Ala	Phe	Ile	Glu	Met	Glu	Ile	Glu
		115				120						125			
Ala	Thr	Asn	Gly	Ala	Val	Pro	Gln	Gly	Gln	Arg	Pro	Pro	Pro	Arg	Ile
	130					135					140				
Lys	Asn	Phe	Gln	Ile	Asn	Asn	Gln	Ile	Val	Lys	Leu	Lys	Tyr	Cys	Tyr
145			150						155					160	
Thr	Cys	Lys	Ile	Phe	Arg	Pro	Pro	Arg	Ala	Ser	His	Cys	Ser	Ile	Cys
			165					170					175		
Asp	Asn	Cys	Val	Glu	Arg	Phe	Asp	His	His	Cys	Pro	Trp	Val	Gly	Asn
		180					185						190		
Cys	Val	Gly	Lys	Arg	Asn	Tyr	Arg	Tyr	Phe	Tyr	Leu	Phe	Ile	Leu	Ser
	195					200					205				
Leu	Ser	Leu	Leu	Thr	Ile	Tyr	Val	Phe	Ala	Phe	Asn	Ile	Val	Tyr	Val
	210				215						220				
Ala	Leu	Lys	Ser	Leu	Lys	Ile	Gly	Phe	Leu	Glu	Thr	Leu	Lys	Glu	Thr
225				230						235				240	
Pro	Gly	Thr	Val	Leu	Glu	Val	Leu	Ile	Cys	Phe	Phe	Thr	Leu	Trp	Ser
			245					250					255		
Val	Val	Gly	Leu	Thr	Gly	Phe	His	Thr	Phe	Leu	Val	Ala	Leu	Asn	Gln
		260						265					270		
Thr	Thr	Asn	Glu	Asp	Ile	Lys	Gly	Ser	Trp	Thr	Gly	Lys	Asn	Arg	Val
	275					280					285				
Gln	Asn	Pro	Tyr	Ser	His	Gly	Asn	Ile	Val	Lys	Asn	Cys	Cys	Glu	Val
	290					295					300				
Leu	Cys	Gly	Pro	Leu	Pro	Pro	Ser	Val	Leu	Asp	Arg	Arg	Gly	Ile	Leu
305				310						315				320	
Pro	Leu	Glu	Glu	Ser	Gly	Ser	Arg	Pro	Pro	Ser	Thr	Gln	Glu	Thr	Ser
			325					330					335		
Ser	Ser	Leu	Leu	Pro	Gln	Ser	Pro	Ala	Pro	Thr	Glu	His	Leu	Asn	Ser

	340		345		350										
Asn	Glu	Met	Pro	Glu	Asp	Ser	Ser	Thr	Pro	Glu	Glu	Met	Pro	Pro	Pro
	355		360		365										
Glu	Pro	Pro	Glu	Pro	Pro	Gln	Glu	Ala	Ala	Glu	Ala	Glu	Lys		
	370		375		380										

<210> 6055

<211> 2089

<212> DNA

<213> Homo sapiens

<400> 6055

```

nnggccgggg cgagagagagg cgagcaccgg gaaggggagc gtggggccgc tggaatgggt
60
gaatttaagg cccatcgagt acgtttcttt aattatgttc catcaggaat ccgctgtgtg
120
gcttacaata accagtcaaa cagattggct gtttcacgaa cagatggcac tgtggaaatt
180
tataacttgt cagcaaaacta ctttcaggag aaatttttcc caggtcatga gtctcgggct
240
acagaagctt tgtgctgggc agaaggacag cgactcttta gtgctgggct caatggcgag
300
attatggagt atgatttaca ggcgttaaac atcaagtatg ctatggatgc ctttggagga
360
cctatttga gcatggctgc cagccccagt ggctctcaac ttttggttgg ttgtgaagat
420
ggatctgtga aactatttca aattaccca gacaaaatcc agtttgaaag aaattttgat
480
cggcagaaaa gtcgcatect gagtctcagc tggcatccct ctggtaccca cattgcagct
540
ggttccatag actacattag tgtgtttgat gtcaaacag gcagcgctgt tcataagatg
600
attgtggaca ggcagtatat gggcgtgtct aagcgggaagt gcatcggtgt ggggtgcgcc
660
ttcttgtccg atggcactat cataagtgtg gactctgctg ggaagggtgca gttctgggac
720
tcagccactg ggacgcttgt gaagagccat ctcategcta atgctgacgt gcagtccatt
780
gctgtagctg accaagaaga cagtttcgtg gtgggcacag cgagggaaca gtcttccatt
840
ttcagctggc ccctgtgaca tctaacagca gtgagaagca gtgggtgctg aaaaaaccgt
900
tccagcatca cactcatgac gtgcgcactg tggccacag cccaacagcg ctgatatctg
960
gaggcactga caccactta gtctttcgtc ctctcatgga gaagggtgaa gtaaagaatt
1020
acgatgccgc tctccgaaaa atcaccttcc cccaccgatg tctcatctcc tgttctaaaa
1080
agaggcagct tctctcttcc cagtttgctc atcacttaga actttggcga ctgggatcca
1140
cagttgcaac aggcaagaat ggggatactc ttccactctc taaaaatgca gatcatttac
1200
tgcacctaaa gacaaagggt cctgagaaca ttatctgtag ctgtatctcc ccatgtggaa
1260

```


gttggatagc ctattctaca gtttctcggt tttttctcta tcggctgaat tatgaacatg
 1320
 acaacataag cctcaaaaagg gtttccaaaa tgccagcatt ccttcgctct gcccttcaga
 1380
 ttttggttttc tgaagattca acaaagctct ttgtagcatc aaatcaagga gctctgcata
 1440
 ttgttcagct gtcaggagga agcttcaagc acctgcatgc tttccagcct cagtcaggaa
 1500
 cagtggaggc catgtgtctt ttggcagtca gtccagatgg gaattggcta gctgcatcag
 1560
 gtaccagtgc tggagtccat gtctacaacg taaaacagct aaagcttcac tgcacgggtgc
 1620
 ctgcttaca tttccagtg actgctatgg ctattgcccc caataccaac aaccttgtca
 1680
 tcgctcattc ggaccagcag gtatttgagt acagcatccc agacaaacag tatacagatt
 1740
 ggagccggac tgtccagaag cagggctttc accacctttg gtcctcaaagg gatactccta
 1800
 tcacacacat cagttttcat cccaagagac cgatgcacat ccttctccat gatgcctaca
 1860
 tgttctgcat cattgacaag tcattgcccc ttccaaatga caaacctta ctctacaatc
 1920
 catttctcc cacgaatgac atcattgctc agctcccacc acccattaaa aagaagaaat
 1980
 ttggaacctt aaacagggca ctgtctgtgt ccttccttga actgtctacc ctgttgcttt
 2040
 tcacaaatca tggtaataaa acaagttatt cttgaaaaaa aaaaaaaaaa
 2089

<210> 6056

<211> 285

<212> PRT

<213> Homo sapiens

<400> 6056

Xaa	Ala	Gly	Ala	Glu	Arg	Gly	Glu	His	Arg	Glu	Gly	Glu	Arg	Gly	Ala
1				5				10						15	
Ala	Gly	Met	Gly	Glu	Phe	Lys	Ala	His	Arg	Val	Arg	Phe	Phe	Asn	Tyr
			20					25						30	
Val	Pro	Ser	Gly	Ile	Arg	Cys	Val	Ala	Tyr	Asn	Asn	Gln	Ser	Asn	Arg
			35				40						45		
Leu	Ala	Val	Ser	Arg	Thr	Asp	Gly	Thr	Val	Glu	Ile	Tyr	Asn	Leu	Ser
			50				55					60			
Ala	Asn	Tyr	Phe	Gln	Glu	Lys	Phe	Phe	Pro	Gly	His	Glu	Ser	Arg	Ala
65					70					75				80	
Thr	Glu	Ala	Leu	Cys	Trp	Ala	Glu	Gly	Gln	Arg	Leu	Phe	Ser	Ala	Gly
			85						90					95	
Leu	Asn	Gly	Glu	Ile	Met	Glu	Tyr	Asp	Leu	Gln	Ala	Leu	Asn	Ile	Lys
			100					105						110	
Tyr	Ala	Met	Asp	Ala	Phe	Gly	Gly	Pro	Ile	Trp	Ser	Met	Ala	Ala	Ser
		115					120					125			
Pro	Ser	Gly	Ser	Gln	Leu	Leu	Val	Gly	Cys	Glu	Asp	Gly	Ser	Val	Lys
		130				135					140				
Leu	Phe	Gln	Ile	Thr	Pro	Asp	Lys	Ile	Gln	Phe	Glu	Arg	Asn	Phe	Asp

```

145          150          155          160
Arg Gln Lys Ser Arg Ile Leu Ser Leu Ser Trp His Pro Ser Gly Thr
          165          170          175
His Ile Ala Ala Gly Ser Ile Asp Tyr Ile Ser Val Phe Asp Val Lys
          180          185          190
Ser Gly Ser Ala Val His Lys Met Ile Val Asp Arg Gln Tyr Met Gly
          195          200          205
Val Ser Lys Arg Lys Cys Ile Val Trp Gly Val Ala Phe Leu Ser Asp
          210          215          220
Gly Thr Ile Ile Ser Val Asp Ser Ala Gly Lys Val Gln Phe Trp Asp
225          230          235          240
Ser Ala Thr Gly Thr Leu Val Lys Ser His Leu Ile Ala Asn Ala Asp
          245          250          255
Val Gln Ser Ile Ala Val Ala Asp Gln Glu Asp Ser Phe Val Val Gly
          260          265          270
Thr Ala Arg Glu Gln Ser Ser Ile Phe Ser Trp Ser Leu
          275          280          285

```

<210> 6057

<211> 3924

<212> DNA

<213> Homo sapiens

<400> 6057

```

tgacataaac atcaagtatt ttgctctaa gattataatc ttacataag ttagaatata
60
tttaaacata agggggagct aaaagcaaat gggggtaaac aaaccagaaa aatcaaaata
120
caaatataca cagagccaaa atagtatttc cgtcagcagc aaaacagaaa caattccaaa
180
attaatgtgc aaatgaaaat aaagtagtta acagtcattc atttaataag cttgtgtatt
240
tgataatgaa aacgcttagc tttccttttc tgacctcgga aaagtaatca ccatctttag
300
taagggtatta cttttaaaag tatgacttta acaagtgaat aaagcatgtt tagagtatgt
360
ttatgttttag aaacaatacc ttgaacacta cagaaaacaa caatattctg aaaaccagt
420
ttattttcca tgctgtggac agatccagtc agtgtgatca ggttttctgc atgtgtaata
480
atttatcaaa ataagttttc tcacaagact cttttccatc aactctgaaa accctgatct
540
gacaacatac cccaataaag ctctggacaa gcacctccta aagcttggaa gaaaatgtgc
600
caagtctttt cctgtaacat ttactgcact acaaatggct aaagagcaat ttatggttta
660
aaaggtgaat agtacaacag gtgagttcag gaaattgttt tagtgcactt tgctccagtt
720
ttagccaaca tgctacattt tccttttttg tttttgtttt gttgttgttg ttttttggg
780
gaaggagagg gagaccgcac aaagtggact tgaggatttc cattgtacga aaaagatatg
840
actctgcaag caaaacagtg taagctgcct tttttcttaa gacctggaca ttttaagaca
900

```

gaaactttgc aaaacattac acaatttttt attattaaat gagaaaatct catttggtac
960
atcgtcacat tgctagtcag agaaatgttg cagtgatgaa gaaagtcaat gttggaccaa
1020
cccaagtcct cattcctaca acattcattt acaaagaaat aatgttcaac acagcccaac
1080
aaaacattct tgggttttctt catattgaag tcccccaaaa aatcctcttc taatggggta
1140
tttactaca taaattatag ttcttcattt ttacaattca ccccaaactg tatgagagat
1200
gtatcacact aagatttcta aagctgttag gaaatccttc acacatcgtc gtcactctgat
1260
gtatcactgc tacttgcttc tgtgtcatca ttctcagttg tgggtttgaa agtgcctgtc
1320
ttccacggtc caaacttgaa gtcacagatc aagccatttt tcaaaatacc atttttctc
1380
agaccattct tctgtaactg ttcactaata acttggaatt ctctcatttc atcctcagtt
1440
aagggagcac atgtttcatc attttactg tcttctgcc agcccatttc ctttaacaat
1500
ctgtgttctg cctcaagtga acttgaaaga acatcagttt gtgggaaggt tgaagaccga
1560
atgatctgct gggaaatcac tgaggcattg ccattctctt gaggaatttc attttcatcg
1620
aagtttcggt ttatatccct ttcttggtga gtactattgc tgttatgtaa attaaatgag
1680
tcgtcatect tctctgagcc agcacggett tcatcttcat gttcctcttc tactctgtct
1740
cttttcaatg ctttcaaaaa ttcactcttc ttatcagtc gcattcgtgt cagtttggtt
1800
agacgaggct gctgattaag ttgtcaaca ggagaagagg aatttgagcg attacactct
1860
ttcactgaat ttgtagatgg actaaagtc ttggcagttg atttaaaagc attaaagttg
1920
ccaacgcaa atgtggactc atgagggaaa gaagttccaa ctttattttc ttttgtttgg
1980
cttttccatt gtgtaggttt tgtaggtgga gcagcaggtt tagggactaa acctttataa
2040
acacttgac cagttccatt cttactggc tgtgacggaa gatttcctac tactgggaat
2100
ccagatagct gtaagtcttt tgtattacct ttcttaatga ccagcatcct tggagctcta
2160
gatttaggat tggaggata ttctaagaga ggagcttggg agattttttt ggttgggtat
2220
gtgtgtgtct gggcgtgtag gccccacaca cctgcagcta aagacttatt gtgatttgg
2280
tctctctcat actcaggatt taaagacgga aaatcctcag cttcaaactg tttgcgttct
2340
ctcttgctt ctttctctcc ggtttcattg tcaggtatgt tgttttcatg tagtcttgg
2400
ctttttctg catggaaaat actgctacga gaacgggaac ttccaccatg gtatccacct
2460
cgatgattta tgttttctgt accatttctt ccatgtgtac gccatccatt tttttcttc
2520

cttccaaagt tacctccatt aggacgtcca atagcagaat caaagccatc tgaagagttg
2580
tgtcgtcgac gggtcacatc ataacgattc tctgtccatg caaagttttc agaatgcttc
2640
tcaaaattca atgacgattt caaactgctg gtcaggacct ttgttgatga tgggtggagta
2700
gggaaattaa gccaggtctg agcaaagtca tgctgcgcca tttagggtcca gtctctccaa
2760
ctcagtgaag caaggcttca acacctcatg gcaagtcaca taatagtact tacaaattcc
2820
aacaggactg cacaggaagg tgttggtttt ttctctgtaa tctttatttt ccagtttgta
2880
tttttatttt gtatctcttg aaataatcgc gaagttcttt gaagatactt aacctacgac
2940
tatttgacat agagttaact caagtcagct acccatactt ctgttttaaa gttttcatat
3000
ggctatctcc cgaattagcc aagttcttta gatttaagat caaagtcctc tttattatcc
3060
catgtacttg ccactgttgt acttggtcac tccagatgaa atatccaatt tacgagccaa
3120
aaagcaaaaa caaaaagaaa atttcacatc tgaagagcat tcctaaacat cagcatatac
3180
agagacacac atagctatct caatactacc atgctgcccg aaaactgcaa catcttaaat
3240
ttccacgtaa ataaaagata aaaggaaaaa aactctgtat tctttcaatc tcttcattca
3300
gaaaaagtgt ccctatttga catgaaagag ctgaagtcaa aaattcctaa aactttcaat
3360
aaaggtaaaa ataaactgcc atgaaacttc agcaatactc agtcatttga aactgctgaa
3420
actactcagt acacaaatca acgtctctca gtttcggctg aagaacccca acaacggggg
3480
gggggaaggg gagggcaaaa ttaccaccag ctgaaatact gtaaccagtt atataatccg
3540
tttgaaccaa aatactgaag aaatgctgcc tgggtctctt tttaagtagc ttgtgaatt
3600
gttcactact atcaattcac ttcacagacg attcttgcca attttaataa acttctgggg
3660
caaaattatc caaaaacact gtaaatccaa aatggccact taaaatatcc agggcctttt
3720
acacaaaacc tagatgatga tcttcacatc tgagtaattc aatcaccttc tgccccacca
3780
gaggtgcccc tggcctgggg gtgcgcgcgc gcctgatccc gggagaaggt tttcggtact
3840
ttgaataatc cccttttgcc gcttttcctt cccccacaac cagtctcagt cccaaaatgg
3900
cgccgacccg atccgcaatg ttct
3924

<210> 6058

<211> 500

<212> PRT

<213> Homo sapiens

<400> 6058

```

Met Ala Gln His Asp Phe Ala Pro Ala Trp Leu Asn Phe Pro Thr Pro
 1           5           10           15
Pro Ser Ser Thr Lys Val Leu Thr Ser Ser Leu Lys Ser Ser Leu Asn
      20           25           30
Phe Glu Lys His Ser Glu Asn Phe Ala Trp Thr Glu Asn Arg Tyr Asp
      35           40           45
Val Asn Arg Arg Arg His Asn Ser Ser Asp Gly Phe Asp Ser Ala Ile
      50           55           60
Gly Arg Pro Asn Gly Gly Asn Phe Gly Arg Lys Glu Lys Asn Gly Trp
      65           70           75           80
Arg Thr His Gly Arg Asn Gly Thr Glu Asn Ile Asn His Arg Gly Gly
      85           90           95
Tyr His Gly Gly Ser Ser Arg Ser Arg Ser Ser Ile Phe His Ala Gly
      100          105          110
Lys Ser Gln Gly Leu His Glu Asn Asn Ile Pro Asp Asn Glu Thr Gly
      115          120          125
Arg Lys Glu Asp Lys Arg Glu Arg Lys Gln Phe Glu Ala Glu Asp Phe
      130          135          140
Pro Ser Leu Asn Pro Glu Tyr Glu Arg Glu Pro Asn His Asn Lys Ser
      145          150          155          160
Leu Ala Ala Gly Val Trp Gly Leu His Ala Gln Thr His Thr Tyr Pro
      165          170          175
Thr Lys Lys Ile Ser Gln Ala Pro Leu Leu Glu Tyr Pro Pro Asn Pro
      180          185          190
Lys Ser Arg Ala Pro Arg Met Leu Val Ile Lys Lys Gly Asn Thr Lys
      195          200          205
Asp Leu Gln Leu Ser Gly Phe Pro Val Val Gly Asn Leu Pro Ser Gln
      210          215          220
Pro Val Lys Asn Gly Thr Gly Pro Ser Val Tyr Lys Gly Leu Val Pro
      225          230          235          240
Lys Pro Ala Ala Pro Pro Thr Lys Pro Thr Gln Trp Lys Ser Gln Thr
      245          250          255
Lys Glu Asn Lys Val Gly Thr Ser Phe Pro His Glu Ser Thr Phe Gly
      260          265          270
Val Gly Asn Phe Asn Ala Phe Lys Ser Thr Ala Lys Asn Phe Ser Pro
      275          280          285
Ser Thr Asn Ser Val Lys Glu Cys Asn Arg Ser Asn Ser Ser Ser Pro
      290          295          300
Val Asp Lys Leu Asn Gln Gln Pro Arg Leu Thr Lys Leu Thr Arg Met
      305          310          315          320
Arg Thr Asp Lys Lys Ser Glu Phe Leu Lys Ala Leu Lys Arg Asp Arg
      325          330          335
Val Glu Glu Glu His Glu Asp Glu Ser Arg Ala Gly Ser Glu Lys Asp
      340          345          350
Asp Asp Ser Phe Asn Leu His Asn Ser Asn Ser Thr His Gln Glu Arg
      355          360          365
Asp Ile Asn Arg Asn Phe Asp Glu Asn Glu Ile Pro Gln Glu Asn Gly
      370          375          380
Asn Ala Ser Val Ile Ser Gln Gln Ile Ile Arg Ser Ser Thr Phe Pro
      385          390          395          400
Gln Thr Asp Val Leu Ser Ser Ser Leu Glu Ala Glu His Arg Leu Leu
      405          410          415
Lys Glu Met Gly Trp Gln Glu Asp Ser Glu Asn Asp Glu Thr Cys Ala

```

420 425 430
 Pro Leu Thr Glu Asp Glu Met Arg Glu Phe Gln Val Ile Ser Glu Gln
 435 440 445
 Leu Gln Lys Asn Gly Leu Arg Lys Asn Gly Ile Leu Lys Asn Gly Leu
 450 455 460
 Ile Cys Asp Phe Lys Phe Gly Pro Trp Lys Asn Ser Thr Phe Lys Pro
 465 470 475 480
 Thr Thr Glu Asn Asp Asp Thr Glu Thr Ser Ser Ser Asp Thr Ser Asp
 485 490 495
 Asp Asp Asp Val
 500

<210> 6059
 <211> 1442
 <212> DNA
 <213> Homo sapiens

<400> 6059
 aatgcattga gaactcaciaa ttttccatgt gttatgcata tgttacatac tttatgtcat
 60
 ttaaagttaa tgattttctt taaagtaatt taaacactac tgaaaacaca ggaactactt
 120
 ttaagcttaa acataacat attatacttt acaagggctt tatccacttg actgtaaatt
 180
 gtatttgatg ctgagctatt cattaaattt aattcagctc cagtaagagt attcaataaa
 240
 caaacattga ttgctttctt atcttacatt tttttaggag tgcgaaataa gtgagtcac
 300
 atgaattggg aaaatgagag ctccccaaaa gagtttatac tacttggtt ctcagatagg
 360
 gcttggttac aaatgccctt ttttgggtc ctgttaatat catacacaat caccatattt
 420
 ggcaatgtgt ccatcatgat ggtgtgcatt ctggatccca aacttcatac tcccatgtat
 480
 ttctttctca ctaatctctc catcttagat ctctgtata ccacaactac agtcctcat
 540
 atgttggtta atattggttg caacaaaaag accatcagct atgctggctg tgtggccac
 600
 ctcatcatct tcctggcctt aggtgtctaca gagtgtctcc ttctggctgt tatgtcctt
 660
 gacagatatg tggtgtttg cagaccctc cactatgtag tcatcatgaa ttattggttc
 720
 tgctaagga tggcagctt ctcattgctc attggtttcg gcaactcagt gctgcagtct
 780
 tccttgactc ttaacatgcc acgtgtggt caccaggaag tggaccactt tttctgtgag
 840
 gtgcctgcac ttctcaagtt gtcatgtgct gacacaaagc ctattgagge tgagctcttc
 900
 ttctttagtg tactaattct tctaattcca gtgacattga tcctcatctc ctatggcttc
 960
 atagctcaag cagtattaaa aatcaggtca gcagaaggac ggcaaaaagc atttgggaca
 1020
 tgtgggtccc acatgattgt ggtgtcctc ttttatggaa cagccattta tatgtatctt
 1080

caaccacctt catccacctc taaggactgg ggaaagatgg tttccctctt ctatggaatc
 1140
 atcacatcca tgttgaactc cctcatctac agccttagaa ataaagatat gaaggaggcc
 1200
 ttcaagaggc tgatgccaaag aatctttttc tgtaagaaat aagaagtact ccattgtgat
 1260
 gagaatcttc ttagtctttc cttatcttca atgatggtaa tgacctttga actcattttc
 1320
 ctattttcca ggctctgggtg atttcactaa attctgtcaa caattagaaa atccttcttc
 1380
 tgttggctgg gcgcgggtgt tcacgcctgt aatcccagta ctttgtgggg gccaaagggtg
 1440
 gc
 1442

<210> 6060
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 6060
 Met Asn Trp Glu Asn Glu Ser Ser Pro Lys Glu Phe Ile Leu Leu Gly
 1 5 10 15
 Phe Ser Asp Arg Ala Trp Leu Gln Met Pro Leu Phe Val Val Leu Leu
 20 25 30
 Ile Ser Tyr Thr Ile Thr Ile Phe Gly Asn Val Ser Ile Met Met Val
 35 40 45
 Cys Ile Leu Asp Pro Lys Leu His Thr Pro Met Tyr Phe Phe Leu Thr
 50 55 60
 Asn Leu Ser Ile Leu Asp Leu Cys Tyr Thr Thr Thr Val Pro His
 65 70 75 80
 Met Leu Val Asn Ile Gly Cys Asn Lys Lys Thr Ile Ser Tyr Ala Gly
 85 90 95
 Cys Val Ala His Leu Ile Ile Phe Leu Ala Leu Gly Ala Thr Glu Cys
 100 105 110
 Leu Leu Leu Ala Val Met Ser Phe Asp Arg Tyr Val Ala Val Cys Arg
 115 120 125
 Pro Leu His Tyr Val Val Ile Met Asn Tyr Trp Phe Cys Leu Arg Met
 130 135 140
 Ala Ala Phe Ser Trp Leu Ile Gly Phe Gly Asn Ser Val Leu Gln Ser
 145 150 155 160
 Ser Leu Thr Leu Asn Met Pro Arg Cys Gly His Gln Glu Val Asp His
 165 170 175
 Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Ala Asp Thr
 180 185 190
 Lys Pro Ile Glu Ala Glu Leu Phe Phe Ser Val Leu Ile Leu Leu
 195 200 205
 Ile Pro Val Thr Leu Ile Leu Ile Ser Tyr Gly Phe Ile Ala Gln Ala
 210 215 220
 Val Leu Lys Ile Arg Ser Ala Glu Gly Arg Gln Lys Ala Phe Gly Thr
 225 230 235 240
 Cys Gly Ser His Met Ile Val Val Ser Leu Phe Tyr Gly Thr Ala Ile
 245 250 255
 Tyr Met Tyr Leu Gln Pro Pro Ser Ser Thr Ser Lys Asp Trp Gly Lys

	260		265		270										
Met	Val	Ser	Leu	Phe	Tyr	Gly	Ile	Ile	Thr	Ser	Met	Leu	Asn	Ser	Leu
	275						280					285			
Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Met	Lys	Glu	Ala	Phe	Lys	Arg	Leu
	290					295					300				
Met	Pro	Arg	Ile	Phe	Phe	Cys	Lys	Lys							
305					310										

<210> 6061
 <211> 1582
 <212> DNA
 <213> Homo sapiens

<400> 6061
 nggcaggccc gcgcccgcgc ccggactttg ccatcggcgg ggcagtcgcg ggatgcgccc
 60
 gggagccaca gcctgaggcc ctcagggtctc tgcagggtgtc gtggaggaac ctagcacctg
 120
 ccatcctctt ccccaatttg ccacttccag cagcttttagc ccatgaggag gatgtgaccg
 180
 ggactgagtc aggagccctc tggagcatg gagactgtgg tgattgttgc cataggtgtg
 240
 ctggccacca tctttctggc ttcgtttgca gccttggtgc tggtttgag gcagcgctac
 300
 tgccggccgc gagacctgct gcagcgctat gattctaagc ccattgtgga cctcattggt
 360
 gccatggaga ccagctctga gccctctgag ttagaactgg acgatgtcgt taccaccaac
 420
 cccacattg aggccattct ggagaatgaa gactggatcg aagatgcctc gggctctcatg
 480
 tcccactgca ttgccatctt gaagatttgt cacactctga cagagaagct tgttgccatg
 540
 acaatgggct ctggggccaa gatgaagact tcagccagtg tcagcgacat catttgtggtg
 600
 gccaaagcga tcagccccag ggtggatgat gttgtgaagt cgatgtaccc tccgttggac
 660
 cccaaactcc tggacgcacg gacgactgcc ctgctcctgt ctgtcagtc cctggtgctg
 720
 gtgacaagga atgcctgcc tctgacggga ggccctggact ggattgacca gtctctgtcg
 780
 gctgctgagg agcatttgga agtccttcga gaagcagccc tagcttctga gccagataaa
 840
 ggctcccag gccctgaagg cttcctgcag gagcagctcg caatttagtg cctacaggcc
 900
 agcagctagc catgaaggcc cctgccgcca tcctggatg gctcagetta gccttctact
 960
 ttttctata gagttagttg ttctccacgg ctggagagtt cagctgtgtg tgcataagtaa
 1020
 agcaggagat ccccgtcagt ttatgcctct tttgcagttg caaactgtgg ctggtgagtg
 1080
 gcagctctaat actacagtta ggggagatgc cattcactct ctgcaagagg agtattgaaa
 1140
 actggtggac tgtcagcttt atttagctca cctagtgttt tcaagaaaat tgagccaccg
 1200

tctaagaaat caagaggttt cacattaaaa ttagaatttc tggcctctct cgatcgggtca
 1260
 gaatgtgtgg caattctgat ctgcattttc agaagaggac aatcaattga aactaagtag
 1320
 ggggtttcttc ttttggcaag acttgctactc tctcacctgg cctgtttcat ttatttgtat
 1380
 tatctgcctg gtccttgagg cgtctgggtc tctcctctcc cttgcagggt tgggtttgaa
 1440
 gctgaggaac tacaaagttg atgattttct ttttatcttt atgcttgc aa ttttacctag
 1500
 ctaccactag gtggatagta aattttatact tatgtttcaa aaaaaaatca tcaactttgt
 1560
 agttcctcag cttcagtcga cg
 1582

<210> 6062

<211> 226

<212> PRT

<213> Homo sapiens

<400> 6062

Met	Glu	Thr	Val	Val	Ile	Val	Ala	Ile	Gly	Val	Leu	Ala	Thr	Ile	Phe
1				5					10					15	
Leu	Ala	Ser	Phe	Ala	Ala	Leu	Val	Leu	Val	Cys	Arg	Gln	Arg	Tyr	Cys
			20					25					30		
Arg	Pro	Arg	Asp	Leu	Leu	Gln	Arg	Tyr	Asp	Ser	Lys	Pro	Ile	Val	Asp
			35				40					45			
Leu	Ile	Gly	Ala	Met	Glu	Thr	Gln	Ser	Glu	Pro	Ser	Glu	Leu	Glu	Leu
	50					55				60					
Asp	Asp	Val	Val	Ile	Thr	Asn	Pro	His	Ile	Glu	Ala	Ile	Leu	Glu	Asn
65					70				75					80	
Glu	Asp	Trp	Ile	Glu	Asp	Ala	Ser	Gly	Leu	Met	Ser	His	Cys	Ile	Ala
			85					90					95		
Ile	Leu	Lys	Ile	Cys	His	Thr	Leu	Thr	Glu	Lys	Leu	Val	Ala	Met	Thr
			100				105						110		
Met	Gly	Ser	Gly	Ala	Lys	Met	Lys	Thr	Ser	Ala	Ser	Val	Ser	Asp	Ile
			115				120					125			
Ile	Val	Val	Ala	Lys	Arg	Ile	Ser	Pro	Arg	Val	Asp	Asp	Val	Val	Lys
			130			135					140				
Ser	Met	Tyr	Pro	Pro	Leu	Asp	Pro	Lys	Leu	Leu	Asp	Ala	Arg	Thr	Thr
145					150				155					160	
Ala	Leu	Leu	Leu	Ser	Val	Ser	His	Leu	Val	Leu	Val	Thr	Arg	Asn	Ala
				165				170					175		
Cys	His	Leu	Thr	Gly	Gly	Leu	Asp	Trp	Ile	Asp	Gln	Ser	Leu	Ser	Ala
			180				185					190			
Ala	Glu	Glu	His	Leu	Glu	Val	Leu	Arg	Glu	Ala	Ala	Leu	Ala	Ser	Glu
			195				200					205			
Pro	Asp	Lys	Gly	Leu	Pro	Gly	Pro	Glu	Gly	Phe	Leu	Gln	Glu	Gln	Ser
			210			215						220			
Ala	Ile														
225															

<210> 6063

<211> 2286

<212> DNA

<213> Homo sapiens

<400> 6063

nnacgcgtga aggggtgcggg gtgcagttgc ggctccaggg ccatggcgga ggagcagggc
60
cgggaacggg actcggttcc caagccgtcg gtgetgttcc tccaccaga cctgggctg
120
ggcggcgtg agcggctggt gttggacgcg gcgctggcgc tgcaggcgcg cgggtgtagc
180
gtgaagatct ggacagcgca ctacgacctg ggccactgtt tcgccgagag ccgcgagcta
240
ccggtgcgct gtgccgggga ctggctgccg cgaggcctgg gctggggcgg ccgcggcgcc
300
gccgtctgcg cctacgtgcg catggttttc ctggcgtct acgtgctgtt cctcgccgac
360
gaggagtctg acgtggtagt gtgcgaccag gtgtctgcct gtatcccagt gttcaggctg
420
gctagacggc ggaagaagat cctattttac tgtcacttcc cagatctgct tctaccaag
480
agagattctt ttcttaaacy actatacagg gcccgaattg actggataga ggaatacacc
540
acaggcatgg cagactgcat cttagtcaac agccagtcca cagctgctgt ttttaaggaa
600
acattcaagt cctgtctca catagaccct gatgtcctct atccatctct aaatgtcacc
660
agctttgact cagttgttcc tgaannaagc tggatgacct agtccccaag gggaaaaaaa
720
ttcctgctgc tctccatcaa cagatacgaa aggaagaaaa atctgacttt ggcactggaa
780
gccctagtac agctgcgtgg aagattgaca tccaagatt gggagagagt tcatctgate
840
gtggcagggt gttatgacga gagagtctg gagaatgtgg aacattatca ggaattgaag
900
aaaatggctc aacagtccga ccttggccag tatgtgacct tcttgaggtc tttctcagac
960
aaacagaaaa tctccctcct ccacagctgc acgtgtgtgc ttacacacc aagcaatgag
1020
cactttggca ttgtccctct ggaagccatg tacatgcagt gccagtcac tgcgtttaat
1080
tcgggtggac ccttggagtc cattgaccac agtgtcacag gggttctgtg tgagcctgac
1140
ccgtgcact tctcagaagc aatagaaaag ttcacccgtg aaccttcctt aaaagccacc
1200
atgggcctgg ctggaagagc cagagtgaag gaaaaatctt ccctgaagc atttacagaa
1260
cagctctacc gatatgttac caaactgctg gtataatcag attgttttta agatctccat
1320
taatgtcatt tttatggatt gtagaccag ttttgaaacc aaaaaagaaa cctagaatct
1380
aatgcagaag agatctttta aaaaataaac ttgagtcttg aatgtgagcc actttcctat
1440
ataccacacc tccctgtcca cttttcagaa aaaccatgtc ttttatgcta taatcattcc
1500

aaattttgcc agtgtaagt tacaaatgtg gtgtcattcc atgttcagca gagtatttta
 1560
 attatatatt ctcgggatta ttgctcttct gtctataaat tttgaatgat actgtgcctt
 1620
 aattggtttt catagtttta gtgtgtatca ttatcaaagt tgattaattt ggcttcatag
 1680
 tataatgaga gcagggttat tgtagtcccc agattcaatc caccgaagtg ttcactgtca
 1740
 tctgttaggg aatttttgtt tgtcctgtct ttgctggat ccatagcgag agtgctctgt
 1800
 atttttttta agataatttg tattttttgca cactgagata taataaaaagg tgtttatcat
 1860
 aaaaaagaaa cagtattaga ttttggcttc cataatctat tttggatttg ttacgaacat
 1920
 ggatatgaca accaaactgg aaatcagaac actagggtaa agtggatatt gaaatgaagc
 1980
 aagaatattg tcacacatgt gttgtgcac ttgttttagg tatatttctt aatgtcatct
 2040
 aggtcattag ttttgttaat atttgtgttg tcttgaccaa gctcctacta agtataggac
 2100
 acaaatgttt tttatcttcc aaggcctggc tcaaagtcca ctgctgcaa gctttctttg
 2160
 accctctggc cacctcccaa gccagaagtt atcttcccc tccatgtact ctagcctttt
 2220
 catgacactg gatattttcg tgacactgac ttatagtcca ctgtttacct ggttggteta
 2280
 acagca
 2286

<210> 6064

<211> 233

<212> PRT

<213> Homo sapiens

<400> 6064

Xaa	Arg	Val	Lys	Gly	Ala	Gly	Cys	Ser	Cys	Gly	Ser	Arg	Ala	Met	Ala
1				5				10						15	
Glu	Glu	Gln	Gly	Arg	Glu	Arg	Asp	Ser	Val	Pro	Lys	Pro	Ser	Val	Leu
		20					25					30			
Phe	Leu	His	Pro	Asp	Leu	Gly	Val	Gly	Gly	Ala	Glu	Arg	Leu	Val	Leu
		35				40					45				
Asp	Ala	Ala	Leu	Ala	Leu	Gln	Ala	Arg	Gly	Cys	Ser	Val	Lys	Ile	Trp
	50				55					60					
Thr	Ala	His	Tyr	Asp	Pro	Gly	His	Cys	Phe	Ala	Glu	Ser	Arg	Glu	Leu
65					70					75				80	
Pro	Val	Arg	Cys	Ala	Gly	Asp	Trp	Leu	Pro	Arg	Gly	Leu	Gly	Trp	Gly
			85					90					95		
Gly	Arg	Gly	Ala	Ala	Val	Cys	Ala	Tyr	Val	Arg	Met	Val	Phe	Leu	Ala
		100						105				110			
Leu	Tyr	Val	Leu	Phe	Leu	Ala	Asp	Glu	Glu	Phe	Asp	Val	Val	Val	Cys
	115					120					125				
Asp	Gln	Val	Ser	Ala	Cys	Ile	Pro	Val	Phe	Arg	Leu	Ala	Arg	Arg	Arg
	130					135					140				
Lys	Lys	Ile	Leu	Phe	Tyr	Cys	His	Phe	Pro	Asp	Leu	Leu	Leu	Thr	Lys

gaggtccagg tggtcacgca tcacatgcag cgctacgccg tgtgggttcgg aggtcccatg
 1140
 ctggcctcga ctcccaggtt ctttcaggtc tgccacacca agaaggacta tgaagagtac
 1200
 gggcccagca tctgccgcca caaccccgtc tttggagtca tgtcctagtg tctgcctgaa
 1260
 cgcgtcgttc gatggtgtca cgttggggaa caagtgtcct tcagaaccca gagaaggccg
 1320
 ccgttctgta aatagcgacg tcgggtgtgc tgcccagcag cgtgcttgca ttgccggtgc
 1380
 atgaggcgcg gcgcggggccc ttcagtaaaa gccatttate cgtgtgccga ccgctgtctg
 1440
 ccagectcct ccttctcccc cctcctcac cctcgtctc cctcctctc ctcctccgag
 1500
 ctgctagctg aaaaatacaa ttctgaagga atccaaatgt gactttgaaa attgttagag
 1560
 aaaacaacat tagaaaatgg cgcaaaatcg ttaggtccca ggagagaatg tgggggcgca
 1620
 aacccttttc ctcccagect atttttgtaa ataaaatgtt taaacttgaa atacaaatcg
 1680
 atgtttatat ttcctatcat tttgtatttt atgggtattg gtacaactgg ctgatactaa
 1740
 gcacgaatag atattgatgt tatggagtgc tgtaatccaa agtttttaat tgtgaggcat
 1800
 gttctgatat gtttataggc aaacaaataa aacagcaaac ttttttgcca catgtttgct
 1860
 agaaaatgat tatactttat tggagtgaca tgaagtttga acactaaaca gtaatgtatg
 1920
 agaattacta cagatacatg tatcttttag tttttttgt ttgaactttc tggagctgtt
 1980
 ttatagaaga tgatggtttg ttgtcgggtga gtgttggtg aaatacttcc ttgcaccatt
 2040
 gtaataaaaag ctgttagaat atttgtaaat atcaaaaaaa aaaa
 2084

<210> 6066

<211> 80

<212> PRT

<213> Homo sapiens

<400> 6066

Gly	Ile	Ala	Ile	Arg	Glu	Ser	Ala	Lys	Val	Val	Asp	Gln	Ala	Gln	Arg
1				5					10					15	
Arg	Val	Leu	Arg	Gly	Val	Asp	Asp	Leu	Asp	Phe	Phe	Ile	Gly	Asp	Glu
		20						25				30			
Ala	Ile	Asp	Lys	Pro	Thr	Tyr	Ala	Thr	Lys	Trp	Pro	Ile	Arg	His	Gly
		35					40				45				
Ile	Ile	Glu	Asp	Trp	Asp	Leu	Met	Glu	Arg	Phe	Met	Glu	Gln	Val	Val
	50				55			60							
Phe	Lys	Tyr	Leu	Arg	Ala	Glu	Pro	Glu	Asp	His	Tyr	Phe	Leu	Met	Gly
65				70				75						80	

<210> 6067

<211> 406

<212> DNA

<213> Homo sapiens

<400> 6067

```

aggcctggca aggtcctcat ccttcccacc acattgcacc ggtgcctctt ctgtggagtc
60
tccctgagct gactgcaccc ctcttcctgg gtagcgggtg cctccccaca gactgtgtg
120
aatatgctgg gcatggggcg gctcgggcca ctgctccctg gccaaacgga agccctggag
180
ggcatggcca gtgcctggga catgcagggg gctcactgga acgactagcg gtccatcc
240
tcctagaact tacattccca gagagaaaga gactcctggg aattataaga gtggagaaag
300
gactataata atcgcaacag ctaacactct tccagctaac actgcatgct gggcactgtc
360
ccgagtacat gaccaccctc acaatactcc tgcagagcgc acgcgt
406

```

<210> 6068

<211> 117

<212> PRT

<213> Homo sapiens

<400> 6068

```

Met Tyr Ser Gly Gln Cys Pro Ala Cys Ser Val Ser Trp Lys Ser Val
 1           5           10           15
Ser Cys Cys Asp Tyr Tyr Ser Pro Phe Ser Thr Leu Ile Ile Pro Arg
 20           25           30
Ser Leu Phe Leu Ser Gly Asn Val Ser Ser Arg Arg Met Arg Thr Ala
 35           40           45
Ser Arg Ser Ser Glu Pro Pro Ala Cys Pro Arg His Trp Pro Cys Pro
 50           55           60
Pro Gly Leu Pro Phe Gly Gln Gly Ala Val Ala Arg Ala Ala Pro Cys
 65           70           75           80
Pro Ala Tyr Ser His Ser Ala Val Gly Arg Pro Pro Leu Pro Arg Lys
 85           90           95
Arg Gly Ala Val Ser Ser Gly Arg Leu His Arg Arg Gly Thr Gly Ala
100           105           110
Met Trp Trp Glu Gly
115

```

<210> 6069

<211> 456

<212> DNA

<213> Homo sapiens

<400> 6069

```

ngggaaggcc taaaaaatgt catttttacc aactgtgtaa aggatgaaaa tgtcaagcag
60
atcatcccga tggctactga actgattggg agaagccacc gctaccaccg aaaagagaac
120
ctggagtact gtatcatggt cattgggggc cccaacgtgg gcaagtcctc cctcatcaac
180

```

tccctccgga ggcagcacct caggaaaggg aaagccacca ggggtgggtgg cgagcctggg
 240
 atcaccagag ctgtgatgtc caaaattcag gtggagtcct caggggccag gcccagcact
 300
 ctgtcaagag ctctgcaggc gtctggcacc tgcgcacctc tgtgtggctt ccggtgtctg
 360
 accacgcttc cctccctccc actcagtgtc cccgctgagc acccccgggg caggcactgc
 420
 cctgccctta ttccacagtc gtcatagtct ttgcgc
 456

<210> 6070

<211> 148

<212> PRT

<213> Homo sapiens

<400> 6070

Xaa	Glu	Gly	Leu	Lys	Asn	Val	Ile	Phe	Thr	Asn	Cys	Val	Lys	Asp	Glu
1				5					10					15	
Asn	Val	Lys	Gln	Ile	Ile	Pro	Met	Val	Thr	Glu	Leu	Ile	Gly	Arg	Ser
		20					25						30		
His	Arg	Tyr	His	Arg	Lys	Glu	Asn	Leu	Glu	Tyr	Cys	Ile	Met	Val	Ile
		35				40					45				
Gly	Val	Pro	Asn	Val	Gly	Lys	Ser	Ser	Leu	Ile	Asn	Ser	Leu	Arg	Arg
	50					55					60				
Gln	His	Leu	Arg	Lys	Gly	Lys	Ala	Thr	Arg	Val	Gly	Gly	Glu	Pro	Gly
65					70				75					80	
Ile	Thr	Arg	Ala	Val	Met	Ser	Lys	Ile	Gln	Val	Glu	Ser	Ser	Gly	Ala
			85						90					95	
Arg	Pro	Ser	Thr	Leu	Ser	Arg	Ala	Leu	Gln	Ala	Ser	Gly	Thr	Cys	Arg
			100					105					110		
Pro	Leu	Cys	Gly	Phe	Arg	Leu	Leu	Thr	Thr	Leu	Pro	Ser	Pro	Pro	Leu
	115						120					125			
Ser	Val	Pro	Ala	Glu	His	Pro	Arg	Gly	Arg	His	Cys	Pro	Ala	Leu	Ile
	130					135						140			
Pro	Gln	Ser	Ser												
145															

<210> 6071

<211> 2633

<212> DNA

<213> Homo sapiens

<400> 6071

nctgaggcgg gtggcatggc ggagaaggat gacaccggag tttgacgaag aggtgggttt
 60
 tgagaattct ccactttacc aatacttaca ggatctggga cacacagact ttgaaatatg
 120
 ttcttctttg tcaccaaaaa cagaaaaatg cacaacagag ggacaacaaa agcctcctac
 180
 aagagtccca ccaaaatacc tgggatatag taatcactca atgaatataa actgcactta
 240
 ctggcatgct caaggaatgg gctattaagc aaggatcct gttaaaagtg gctgaaacca
 300

tcaaaagtgtg gatttttttt tctcagtgca ataagaaaga tgacttactt cacaagttgg
360
atattggatt ccgactcgac tcattacata ccacctcgca acaggaagtc ctgttacaag
420
aggatgtgga gctgattgag ctacttgatc ccagtatcct gtctgcaggg caatctcaac
480
aacaggaaaa tggacacctt ccaacacttt gctccctggc aaccctaata atttgggac
540
tctcaatgct atttgccttc attagcttgc tegtattgct tcccacttgg tggattgtgt
600
cttcttggct ggtatgggga gtgattctat ttgtgtatct gggtcataaga gctttgagat
660
tatggaggac agccaaacta caagtgacct taaaaaata cagcggtcat ttggaagata
720
tggccacaaa cagccgagct tttactaacc tctgagaaaa agctttacgt ctcatccaag
780
aaaccgaagt gatttccaga ggatttacac tggtcagtc tgcttgccca ttaataaag
840
ctggacagca tccaagtcag catctcatcg gtcttcggaa agctgtctac cgaactctaa
900
gagccaactt ccaagcagca aggctagcta ccctatatat gctgaaaaac taccctcga
960
actctgagag tgacaatgta accaactaca tctgtgtggt gcctttttaa gagctgggac
1020
ttggacttag tgaagagcag atttcagaag aggaagcaca taactttaca gatggcttca
1080
gcctgcctgc attgaaggtt ttgttccaac tctgggtggc acagagttca gagttcttca
1140
gacggttagc cctattactt tctacagcca attcacctcc tgggacctta ctactccag
1200
cacttctgcc tcctcgtatc ttatctgatg tgactcaagg tctacctcat gctcattctg
1260
cctgtttgga agagcttaag cgcagctatg agttctatcg gtactttgaa actcagcacc
1320
agtcagtagc gcagtggttt tccaaaactc aacagaagtc aagagaactg aataatgttc
1380
acacagcagt gcgtagcttg cagctccatc tgaaagcatt actgaatgag gtaataattc
1440
ttgaagatga acttgaaaag cttgtttgta ctaaagaaac acaagaacta gtgtcagagg
1500
cttatcccat cctagaacag aaattaaagt tgattcagcc ccacgttcaa gcaagcaaca
1560
attgctggga agaggccatt tctcaggtcg acaaactgct acgaagaaat acagataaaa
1620
aaggcaagcc tgaaatagca tgtgaaaacc cacattgtac agtagtacct ttgaagcagc
1680
ctactctaca cattgcagac aaagatccaa tcccagagga gcaggaatta gaagcttatg
1740
tagatgatat agatattgat agtgatttca gaaaggatga tttttattac ttgtctcaag
1800
aagacaaaga gagacagaag cgtgagcatg aagaatccaa gaggggtgctc caagaattaa
1860
aatctgtgct gggattttaa gcttcagagg cagaaaggca gaagtggag caacttctat
1920

ttagtgatca tggtaagcac tgactttaaa gtaacagggtt atttcaatgt aggggattct
 1980
 ttctttcttg aaccatgaat gttatttttag ctgaagaatt cttgggggtt tataagggtc
 2040
 caccagtatg catagtactt tttcttctag atgctaaatc aatttgatta ataaaagagt
 2100
 aggaatgtaa tcacattgga aatatgaagt catacttttt tatgagttat ttaatttttt
 2160
 agtaaatgtg ttttagaatg ggcagtgagt tgaataattt gggatatttt aatgttatt
 2220
 ttcaaattta gtgaatttga gattctcaac tctgttgtec atatgttaaa atatttaaaa
 2280
 atacctcagt gaagcacaaa attaataact gtgctcacat tgaaaaaat ggcccaggcg
 2340
 cggcggcaca tgcttgtaat atcagcacgt tgggaagctg aggcgggttg atcatttgag
 2400
 gtcaggagt caagaccagc ctggccaaca tggcgaaacc ccatctctac taaaaatata
 2460
 aaaattaaca aggcattgtg gcgcgtgcct gtagtccag ctactcgaga ggctgaggca
 2520
 ggagaatcac ttgaaccctg gaggcggagg tttcagtga ccaagatcac gccactgcac
 2580
 tccagcctgg gcaacagang ggagactcca tctcaaaaaa aaaaaaaaaa aaa
 2633

<210> 6072
 <211> 76
 <212> PRT
 <213> Homo sapiens

<400> 6072
 Met Ala Gln Ala Arg Arg His Met Leu Val Ile Ser Ala Arg Trp Glu
 1 5 10 15
 Ala Glu Ala Gly Ser Phe Glu Val Arg Ser Ser Arg Pro Ala Trp
 20 25 30
 Pro Thr Trp Arg Asn Pro Ile Ser Thr Lys Asn Thr Lys Ile Asn Lys
 35 40 45
 Ala Trp Trp Arg Val Pro Val Val Pro Ala Thr Arg Glu Ala Glu Ala
 50 55 60
 Gly Glu Ser Leu Glu Pro Gly Arg Arg Arg Phe Gln
 65 70 75

<210> 6073
 <211> 387
 <212> DNA
 <213> Homo sapiens

<400> 6073
 ntgtcactta agttgccacc tctgcataag agctctctga tcagaaagca gtttctttgt
 60
 tgacccagc cagccttggc tctcgggttg ggaaatacag tcacggtatc catggagacc
 120
 tcttgagggtg gagacgggag ttaaacctt ctcaggcagt ctgaggtggc cagagtctga
 180

agcaagcagc ctctatggag cgaggggagc aggtgggccc agcctgagcg gggcctctgc
 240
 acagccagct ttccccacac cctgtctcca gccagggcac ccacaggccc tttctctccc
 300
 aggatgaagc ctgctgggag cgtgaatgac atggccctgg atgccttcga cttggaccgg
 360
 atgaagcagg agatcctaga ggaggtg
 387

<210> 6074

<211> 69

<212> PRT

<213> Homo sapiens

<400> 6074

Ser	Lys	Gln	Pro	Leu	Trp	Ser	Glu	Gly	Ser	Arg	Trp	Ala	Gln	Pro	Glu
1				5					10					15	
Arg	Gly	Leu	Cys	Thr	Ala	Ser	Phe	Pro	Pro	His	Leu	Ser	Pro	Ala	Arg
			20					25					30		
Ala	Pro	Thr	Gly	Pro	Phe	Ser	Pro	Arg	Met	Lys	Pro	Ala	Gly	Ser	Val
		35				40					45				
Asn	Asp	Met	Ala	Leu	Asp	Ala	Phe	Asp	Leu	Asp	Arg	Met	Lys	Gln	Glu
	50				55						60				
Ile	Leu	Glu	Glu	Val											
65															

<210> 6075

<211> 4668

<212> DNA

<213> Homo sapiens

<400> 6075

nnctaggacg cctcgctgag gctggcgggc tgctcactgc tccggcctgg ctcacctcta
 60
 gacggcaaga tgagtgaacc ataaacttct atccaattaa agtcactgtc tttttgaagt
 120
 ctcattacag catctggctg tactctaaca tatacaaata tgtttctggt tcaacatctc
 180
 ctgtgcacgg agaaagcaca ggcattgttc tcacaagtca caaactacta agttaaatac
 240
 cttaacttct gggaatgttt tttaaaagga ggtgaaaatt gggtacaact ttacttttct
 300
 taccttggtta agatactcat aagcctctac atcatttcca ctgtgatagt ttcggatccc
 360
 ttgaagtaag tagagtctta gaaacagtac cttctcttcc ccacaatttc cttttatgtg
 420
 gaccagtctc tgatgatttt ctccgtaaca atttttaaag catttctggg ccaagtttaa
 480
 ttttttttct gcacatcaaa ggcattccag ctgttccagg cggaagtaac accacactat
 540
 atccagctgg aggacggcat agttatccac tgtgtccage agctctctgc aacactcaca
 600
 gaaatatttg tcagcgtcca acagacatgg caaggctatt ccatattctt ttcttttcag
 660

gaaagctctg ccccttctcat gatatacccat agctaacata agggcttttc tttctgatgg
720
gggaattctg attgatctgc ctgtctgggt agctatgtct aagtacgggtg tcatttctgg
780
atccaccact gtctctgctg ctctctttgc cagtatttct agtcctctct tggctctctg
840
aatttgtttt tctttgagtt tggcctcatt ttgctcctct tcctctaact ggaagttttt
900
cctcgcgctc tcttcagatt gttttagttc aagcaccatc gctttcacat tgtgagccac
960
gccttgttct tcaagggttt tccctagttg tagttgcttc ttatttatga caattttgat
1020
ataattttct tgaagtccaa aggtttcagc tattttggac ctgagttctc tgccagtgat
1080
gtgcaatcgg gtctccaaca agtttttctc atcttttttt agtcttggtg gtaaaaacac
1140
ctcgattgta gcaattcccg ttgttctata attgtcattt cctgttccac gctcaattgc
1200
cttgcaacgt atttcttcta ttaccttttc tacttcattt tcacagcatt ctagtctgtc
1260
agagtactgc ttagcaaggt ctttttttag tcttggtggt aaaaacacct cgattgtagc
1320
aattcccggt gttctataat tgtcatttcc tgttccacgc tcaattgctt tgcaacgtat
1380
ttcttctatt accttttcta cttcattttc acagcattct agtctgtcag agtactgctt
1440
agcaaggctc ttaaatgcca aaccaacttt tttattttca tctgtatatg gaggtttcca
1500
aagttgaatc ctgtcttccc ttaaaaactg ggtcaatttt gcttgaagat atttcttttg
1560
tgccatccct gcgccacgcc actcccgccg cgaccagcag agatggcaca aaagaaatat
1620
cttcaagcaa aattgaccca gtttttaagg gaagacagga ttcaactttg gaaacctcca
1680
tatactgaag aaaataaaga agttggtttg gecttaagag accttgctaa gcagtactct
1740
gacagactag aatgctgtga aaatgaagta gaaaaggtaa tagaagaaat acgttgcaag
1800
gcaattgagc gtggaacagg aaatgacaat tatagaacaa cgggaattgc tacaatcgag
1860
gtgtttttac caccaagact aaaaaaagat aggaaaaact tgttgagagc ccgattgcac
1920
atcactggca gagaactgag gtccaaaata gctgaaacct ttggacttca agaaaattat
1980
atcaaaattg tcataaataa gaagcaacta caactagggg aaacccttga agaacaaggc
2040
gtggctcaca atgtgaaagc gatggtgctt gaactaaaac aatctgaaga ggacgcgagg
2100
aaaaacttcc agtttagagg agaggagcaa aatgaggcca aactcaaaga aaaacaaatt
2160
cagaggacca agaggagact agaaatactg gcaaagagag cagcagagac agtgggtggat
2220
ccagaaatga caccgtactt agacatagct aaccagacag gcagatcaat cagaattccc
2280

ccatcagaaa gaaaagccct tatgttagct atgggatatc atgagaaggg cagagctttc
2340
ctgaaaagaa aagaatatgg aatagccttg ccatgtctgt tggacgctga caaatatttc
2400
tgtgagtgtt gcagagagct gctggacaca gtggataact atgccgtcct ccagctggat
2460
atagtgtggt gttacttccg cctggaacag ctggaatgcc ttgatgatgc agaaaaaaaa
2520
ttaaacttgg ccagaaaatg ctttaaaaat tgttacggag aaaatcatca gagactggtc
2580
cacataaaaag gaaattgtgg gaaagagaag gtactgtttc taagactcta cttacttcaa
2640
gggatccgaa actatcacag tggaaatgat gtagaggctt atgagtatct taacaggcac
2700
gtcagctctt taaagagcta tatattgatc catcaaaagt ggacaatttg ttgagtttg
2760
ggtttactgc ccagggaagnc ccggcttggc ctgagggcgt gtgatgggaa cgtggatcat
2820
gcggccactc atattacca cccagagagag gaactggccc aaataaggaa ggaggaaaaa
2880
gagaagaaaa gacgccgcct cgagaacatc aggtttctga aagggatggg ctactccacg
2940
cacgcggccc agcagattct gctcagcaat cctcagatgt ggtgggttaa tgattccaat
3000
cctgaaaccg acaaccgtca agaaagtect tcccaggaaa acattgaccg attggtgtac
3060
atgggttttg atgcactcgt ggccgaagct gcgctgagag tgttcagagg caacgtccag
3120
ctggccgccc agacccttgc tcacaacgga ggaagcctgc ctcccagct gccgctgtcg
3180
ccagaagact ctttgtcccc gccagccacg tcccctctcg actccgcagg aacctctagt
3240
gcctcaacag acgaagacat ggagacagag gccgtcaatg agatactgga agacattcca
3300
gagcatgagg aagactatct tgactcaact ctggaagatg aagaaattat tattgcagag
3360
tacctatcct atgtagaaaa taggaagtca gcaacaaaga aaaactaaat aatgaacaga
3420
aatagcgcta attttctgct tataaatgct atcattatga aaaggcta at gcagctcttt
3480
ctgttcttac ttttctctg aattacaagt cctctttggg tgtaggaggg ggtgggcagg
3540
ggacaagtcc aggaggggtc ccagggcctt catgcatggt ctcggggaag aagcttcttt
3600
tggcctggcg caagccgttc catctggctc ccaagtctgc gtccctaacc ccttcccag
3660
cttggtgttt taccgccaaa caggaaggaa caggggtcct gtagaacagg ggtcctgggg
3720
aagggtgtcca gggcagggtc ctgggaaggg tgtcccact gcttcctctc cagctgtggc
3780
tccatctgcc cagcttgccg gcctcctgca cccaactgcc tgaccttctt gcttcccacg
3840
ctgccatctc tgccagggtg ccacatgggt tccgtgtcca ccttttcccc gccctcaaa
3900

tcgtccttta agtcttcctt ccaagtgtcg tggggcataa cgatgaggcg ctggccttgg
 3960
 gggcacacca ggtcgcagca aatggcttca gcctgggacg ccagtgtttt atgtctcttag
 4020
 ttcagtaaaa tacgcccccg aaattcaaga ttgagtgtca ggctttatat atattcagca
 4080
 ttcttcatta cagaaatctt ctattgaatg ggaaaggttt aaatgctaac caaagcaatt
 4140
 tatttttaat taatattttt agactctgtg ctgtcactg gaactcactg ctagctaaga
 4200
 gacctatcag agatttagat atattttctc cagggttttt gtgggttttc tttgttgttg
 4260
 ttgttgttct agccatgtga cagaggctct ttctaaaagt atgtagtctg ctgtgtgtcg
 4320
 gctccagcag taaccgtcct cactgcgcca cgcactctc tgtagatgtg tgcccagtgg
 4380
 gagttccttc cagccccagg accgcagcag cagccagggtg ccgagtggat tgagtgccag
 4440
 gtgcaccaa gactttccct cccttcaga aggcactgac tgaagacagg atggatcatg
 4500
 cggagccggc tgaatgctc caacttttcc aaagtgtggg tgggtccagtt tggactgatg
 4560
 ggaatcttct tgtcattctt tttaaacgga tgataccgat ggaaataaaa ggtgggaaat
 4620
 atattcaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 4668

<210> 6076

<211> 601

<212> PRT

<213> Homo sapiens

<400> 6076

Met Ala Gln Lys Lys Tyr Leu Gln Ala Lys Leu Thr Gln Phe Leu Arg
 1 5 10 15
 Glu Asp Arg Ile Gln Leu Trp Lys Pro Pro Tyr Thr Glu Glu Asn Lys
 20 25 30
 Glu Val Gly Leu Ala Leu Lys Asp Leu Ala Lys Gln Tyr Ser Asp Arg
 35 40 45
 Leu Glu Cys Cys Glu Asn Glu Val Glu Lys Val Ile Glu Glu Ile Arg
 50 55 60
 Cys Lys Ala Ile Glu Arg Gly Thr Gly Asn Asp Asn Tyr Arg Thr Thr
 65 70 75 80
 Gly Ile Ala Thr Ile Glu Val Phe Leu Pro Arg Leu Lys Lys Asp
 85 90 95
 Arg Lys Asn Leu Leu Glu Thr Arg Leu His Ile Thr Gly Arg Glu Leu
 100 105 110
 Arg Ser Lys Ile Ala Glu Thr Phe Gly Leu Gln Glu Asn Tyr Ile Lys
 115 120 125
 Ile Val Ile Asn Lys Lys Gln Leu Gln Leu Gly Lys Thr Leu Glu Glu
 130 135 140
 Gln Gly Val Ala His Asn Val Lys Ala Met Val Leu Glu Leu Lys Gln
 145 150 155 160
 Ser Glu Glu Asp Ala Arg Lys Asn Phe Gln Leu Glu Glu Glu Glu Gln

					165					170					175	
Asn	Glu	Ala	Lys	Leu	Lys	Glu	Lys	Gln	Ile	Gln	Arg	Thr	Lys	Arg	Gly	
			180					185					190			
Leu	Glu	Ile	Leu	Ala	Lys	Arg	Ala	Ala	Glu	Thr	Val	Val	Asp	Pro	Glu	
		195					200					205				
Met	Thr	Pro	Tyr	Leu	Asp	Ile	Ala	Asn	Gln	Thr	Gly	Arg	Ser	Ile	Arg	
	210					215					220					
Ile	Pro	Pro	Ser	Glu	Arg	Lys	Ala	Leu	Met	Leu	Ala	Met	Gly	Tyr	His	
225					230					235					240	
Glu	Lys	Gly	Arg	Ala	Phe	Leu	Lys	Arg	Lys	Glu	Tyr	Gly	Ile	Ala	Leu	
				245					250					255		
Pro	Cys	Leu	Leu	Asp	Ala	Asp	Lys	Tyr	Phe	Cys	Glu	Cys	Cys	Arg	Glu	
			260					265					270			
Leu	Leu	Asp	Thr	Val	Asp	Asn	Tyr	Ala	Val	Leu	Gln	Leu	Asp	Ile	Val	
	275						280					285				
Trp	Cys	Tyr	Phe	Arg	Leu	Glu	Gln	Leu	Glu	Cys	Leu	Asp	Asp	Ala	Glu	
	290					295					300					
Lys	Lys	Leu	Asn	Leu	Ala	Gln	Lys	Cys	Phe	Lys	Asn	Cys	Tyr	Gly	Glu	
305					310					315					320	
Asn	His	Gln	Arg	Leu	Val	His	Ile	Lys	Gly	Asn	Cys	Gly	Lys	Glu	Lys	
				325					330					335		
Val	Leu	Phe	Leu	Arg	Leu	Tyr	Leu	Leu	Gln	Gly	Ile	Arg	Asn	Tyr	His	
			340					345					350			
Ser	Gly	Asn	Asp	Val	Glu	Ala	Tyr	Glu	Tyr	Leu	Asn	Arg	His	Val	Ser	
	355						360					365				
Ser	Leu	Lys	Ser	Tyr	Ile	Leu	Ile	His	Gln	Lys	Trp	Thr	Ile	Cys	Cys	
	370					375					380					
Ser	Trp	Gly	Leu	Leu	Pro	Arg	Lys	Xaa	Arg	Leu	Gly	Leu	Arg	Ala	Cys	
385					390					395					400	
Asp	Gly	Asn	Val	Asp	His	Ala	Ala	Thr	His	Ile	Thr	Asn	Arg	Arg	Glu	
				405					410					415		
Glu	Leu	Ala	Gln	Ile	Arg	Lys	Glu	Glu	Lys	Glu	Lys	Lys	Arg	Arg	Arg	
			420					425				430				
Leu	Glu	Asn	Ile	Arg	Phe	Leu	Lys	Gly	Met	Gly	Tyr	Ser	Thr	His	Ala	
	435						440					445				
Ala	Gln	Gln	Ile	Leu	Leu	Ser	Asn	Pro	Gln	Met	Trp	Trp	Leu	Asn	Asp	
	450					455					460					
Ser	Asn	Pro	Glu	Thr	Asp	Asn	Arg	Gln	Glu	Ser	Pro	Ser	Gln	Glu	Asn	
465					470					475					480	
Ile	Asp	Arg	Leu	Val	Tyr	Met	Gly	Phe	Asp	Ala	Leu	Val	Ala	Glu	Ala	
				485					490					495		
Ala	Leu	Arg	Val	Phe	Arg	Gly	Asn	Val	Gln	Leu	Ala	Ala				

595

600

<210> 6077

<211> 2093

<212> DNA

<213> Homo sapiens

<400> 6077

cgccccgggca ggtctccccg aagtggccgg tccagagctg tggggtgect ccgcgcggtc
60
tctggcggat cggggaatcg gatcaaggcg agaggatccg gcaggggaagg agcttcgggg
120
ccgggggttg ggccgcacat ttacgtgcgc gaagcggagg accgggagct ggtgacgatg
180
gcggggccgc agccctggc gctgcaactg gaacagtgtg tgaacccgcg accaagcgag
240
gcggaccctg aagcggaccc cgaggaagcc actgctgcc a ggtgattga caggtttgat
300
gaaggggaag atggggaagg tgatttccta gtagtgggta gcattagaaa actggcatca
360
gcctccctct tggacacgga caaaaggatg tgcggcaaaa ccacctctag aaaagcatgg
420
aatgaagacc attgggagca gactctgcc a ggatcgtctg atgaggaaat atctgatgag
480
gaaggtctg gagatgaaga ttcagaggga ctgggtctgg aggaatatga tgaggacgac
540
ctgggtgctg ctgaggaaca ggagtgtggt gatcaggag agcaagaaga cgagaagcca
600
ctctgcaaaa acaccgggct tcagtgtcca gagtatcagt gactttgaga aatttaccaa
660
gggaatggat gacctgggag cagtgaggag gaggaagacg aagagagtgg catggaagaa
720
ggggatgacg cggaagactc ccaaggcgag agtgaggaag acagggctgg agatagaaac
780
agtgaggatg atggtgtggt gatgaccttc tctagtgtca aagtttctga ggaagtggag
840
aaaggaagag ccgtgaagaa ccagatagca ctgtgggacc agctcttgga aggaaggatc
900
aaactacaaa aagctctgtt gaccaccaac cagcttcctc aaccagatgt tttccattg
960
ttcaaggaca aaggtggccc agaattttcc agtgccctga aaaatagtca caaggcactt
1020
aaagcattgt tgaggtcatt ggtaggtctt caggaagagt tgcttttcca gtaccagac
1080
actagatata tagtagatgg gacaaagccc aatgcgggaa gtgaggagat ttctagtga
1140
gatgatgagc tggtagaaga gaagaagcag caacgaagaa gggtcctgc aaagaggaag
1200
ctggagatgg aggactatcc cagcttcatg gcaaagcgtt ttgccgactt tacagtctac
1260
aggaaccgca cacttcagaa atggcacgat aagaccaaac tggcttctgg aaaactgggg
1320
aagggttttg gtgcctttga acgctcaatc ttgactcaga tcgaccatat tctgatggac
1380

5260

aaagagagat tacttcgaag gacacagacc aagcgctctg tctatcgagt tcttgcaaa
 1440
 cctgagccag cagctcagcc tgtcccagag agtttgccag gggaaccgga gatccttctc
 1500
 caagcccctg ctaatgctca tctgaaggac ttggatgaag aaatctttga tgatgatgac
 1560
 ttttaccacc agctccttcg agaactcata gaacggaaga ccagctcctt ggatcccaac
 1620
 gatcaggtgg ccattgggaag gcagtggcctt gcaatccaga agttacgaag caaaatccac
 1680
 aaaaaagtag ataggaaagc cagcaaaggc aggaacttc gggttcatgt ccttagcaag
 1740
 ctactgagtt tcatggcacc tattgaccat actacaatga atgatgatgc caggacagaa
 1800
 ctgtaccgct ctctttttgg ccagctccac cctcccgacg aaggccacgg ggattgacat
 1860
 cgcccacctc cgacaccag tgggcgcctt ggctggtgag gctgctggtc cagatggagg
 1920
 aaaccagtga ctttatgggg ctgagctagt agggaagccc ctggaagat gctgcgttcc
 1980
 gaacctgtgc ctaatacacg caaggcgct gtcccgccca accccgcctt taaacgccac
 2040
 aaataaagag cattgttacc gccaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
 2093

<210> 6078

<211> 213

<212> PRT

<213> Homo sapiens

<400> 6078

Arg	Pro	Gly	Arg	Ser	Pro	Gly	Ser	Gly	Arg	Ser	Arg	Ala	Val	Gly	Cys
1				5				10					15		
Leu	Arg	Ala	Val	Ser	Gly	Gly	Ser	Gly	Asn	Arg	Ile	Lys	Ala	Arg	Gly
			20					25				30			
Ser	Gly	Arg	Glu	Gly	Ala	Ser	Gly	Pro	Gly	Val	Gly	Pro	His	Ile	Tyr
			35				40				45				
Val	Arg	Glu	Ala	Glu	Asp	Arg	Glu	Leu	Val	Thr	Met	Ala	Gly	Pro	Gln
			50			55				60					
Pro	Leu	Ala	Leu	Gln	Leu	Glu	Gln	Leu	Leu	Asn	Pro	Arg	Pro	Ser	Glu
				70				75						80	
Ala	Asp	Pro	Glu	Ala	Asp	Pro	Glu	Glu	Ala	Thr	Ala	Ala	Arg	Val	Ile
				85				90					95		
Asp	Arg	Phe	Asp	Glu	Gly	Glu	Asp	Gly	Glu	Gly	Asp	Phe	Leu	Val	Val
			100				105				110				
Gly	Ser	Ile	Arg	Lys	Leu	Ala	Ser	Ala	Ser	Leu	Leu	Asp	Thr	Asp	Lys
			115				120					125			
Arg	Tyr	Cys	Gly	Lys	Thr	Thr	Ser	Arg	Lys	Ala	Trp	Asn	Glu	Asp	His
			130				135				140				
Trp	Glu	Gln	Thr	Leu	Pro	Gly	Ser	Ser	Asp	Glu	Glu	Ile	Ser	Asp	Glu
				145			150			155				160	
Glu	Gly	Ser	Gly	Asp	Glu	Asp	Ser	Glu	Gly	Leu	Gly	Leu	Glu	Glu	Tyr
				165				170				175			
Asp	Glu	Asp	Asp	Leu	Gly	Ala	Ala	Glu	Glu	Gln	Glu	Cys	Gly	Asp	Gln

180 185 190
 Gly Glu Gln Glu Asp Glu Lys Pro Leu Cys Lys Asn Thr Gly Leu Gln
 195 200 205
 Cys Pro Glu Tyr Gln
 210

<210> 6079
 <211> 651
 <212> DNA
 <213> Homo sapiens

<400> 6079
 ggccagtcc cgcctcgct ccgtcagttt cccctgctg aactactggg tgcggagcgg
 60
 gtgcgtgcgc agcctgcgca tgtgcatagg ggtcgactgc cgctgcggtg catgaggcgg
 120
 catgcgcagc ggggcccgtgg gtgtacgcgg cgcagcgcgg cagtcctgat ggcccggcat
 180
 ggggtaccgc tgcgtccctt gctgtcgttc ctggtcggcg cgtgggtcaa gctaggaaat
 240
 ggacaggcta ctagcatggt ccaactgcag ggtgggagat tcctgatggg aacaaattct
 300
 ccagacagca gagatggtga agggcctgtg cgggaggcga cagtgaacc ctttgccatc
 360
 gacatatttc ctgtcaccaa caaagatttc agggattttg tcaggagaga aaagtatcgg
 420
 acagaagctg agatgttttg atggagcttt gtctttgagg actttgtctc tgatgagctg
 480
 agaaacaaag ccaccagcc aatgaagtct gtactctggt ggcttccagt ggaaaaggca
 540
 ttttgaggc agcctgcagg tcctggctct ggcacccgag agagactgga gcaccagtg
 600
 ttacacgtga gctggaatga cgcccggtgc tactgtgctt ggccggggaaa a
 651

<210> 6080
 <211> 162
 <212> PRT
 <213> Homo sapiens

<400> 6080
 Leu Met Ala Arg His Gly Leu Pro Leu Leu Pro Leu Leu Ser Leu Leu
 1 5 10 15
 Val Gly Ala Trp Leu Lys Leu Gly Asn Gly Gln Ala Thr Ser Met Val
 20 25 30
 Gln Leu Gln Gly Gly Arg Phe Leu Met Gly Thr Asn Ser Pro Asp Ser
 35 40 45
 Arg Asp Gly Glu Gly Pro Val Arg Glu Ala Thr Val Lys Pro Phe Ala
 50 55 60
 Ile Asp Ile Phe Pro Val Thr Asn Lys Asp Phe Arg Asp Phe Val Arg
 65 70 75 80
 Glu Lys Lys Tyr Arg Thr Glu Ala Glu Met Phe Gly Trp Ser Phe Val
 85 90 95
 Phe Glu Asp Phe Val Ser Asp Glu Leu Arg Asn Lys Ala Thr Gln Pro

[illegible]

```
<210> 6081
<211> 655
<212> DNA
<213> Homo sapiens
```

```

<400> 6081
gataatgatac aggaacctcc ctattcaatg ataacattac acgaaatggc agaaacagat
60
gaaggatggg tggatgttgt ccagtcttta attagagtta ttccactgga agatccactg
120
ggaccagctg ttataacatt gttactagat gaatgtccat tgcccactaa agatgcactc
180
cagaaattga ctgaaattct caatttaaat ggagaagtag cttgccagga ctcaagccat
240
cctgccaaac acaggaacac atctgcagtc ctaggctgct tggccgagaa actagcaggt
300
cctgcaagta taggtttact tagcccagga atactggaat acttgctaca gtgtctgaag
360
ttacagtccc accccacagt catgcttttt gcacttatcg cactggaaaa gtttgcacag
420
acaagtgaaa ataaattgac tatttctgaa tccagtatta gtgaccggct tgtcacattg
480
gagtcctggg ctaatgatcc tgattatctg aaacgtcaag ttggtttctg tgcccagtg
540
agcttagaca atctcttttt aaaagaaggt agacagctga cctatgagaa agtgaacttg
600
agtgcatta gggccatgct gaatagcaat gatgtcagcg agtacctgaa gatct
655

```

```
<210> 6082
<211> 218
<212> PRT
<213> Homo sapiens
```

<400> 6082															
Asp	Asn	Asp	Gln	Glu	Pro	Pro	Tyr	Ser	Met	Ile	Thr	Leu	His	Glu	Met
1				5					10					15	
Ala	Glu	Thr	Asp	Glu	Gly	Trp	Leu	Asp	Val	Val	Gln	Ser	Leu	Ile	Arg
			20					25					30		
Val	Ile	Pro	Leu	Glu	Asp	Pro	Leu	Gly	Pro	Ala	Val	Ile	Thr	Leu	Leu
		35					40					45			
Leu	Asp	Glu	Cys	Pro	Leu	Pro	Thr	Lys	Asp	Ala	Leu	Gln	Lys	Leu	Thr
50						55					60				
Glu	Ile	Leu	Asn	Leu	Asn	Gly	Glu	Val	Ala	Cys	Gln	Asp	Ser	Ser	His

```

65          70          75          80
Pro Ala Lys His Arg Asn Thr Ser Ala Val Leu Gly Cys Leu Ala Glu
      85          90          95
Lys Leu Ala Gly Pro Ala Ser Ile Gly Leu Leu Ser Pro Gly Ile Leu
      100        105        110
Glu Tyr Leu Leu Gln Cys Leu Lys Leu Gln Ser His Pro Thr Val Met
      115        120        125
Leu Phe Ala Leu Ile Ala Leu Glu Lys Phe Ala Gln Thr Ser Glu Asn
      130        135        140
Lys Leu Thr Ile Ser Glu Ser Ser Ile Ser Asp Arg Leu Val Thr Leu
      145        150        155        160
Glu Ser Trp Ala Asn Asp Pro Asp Tyr Leu Lys Arg Gln Val Gly Phe
      165        170        175
Cys Ala Gln Trp Ser Leu Asp Asn Leu Phe Leu Lys Glu Gly Arg Gln
      180        185        190
Leu Thr Tyr Glu Lys Val Asn Leu Ser Ser Ile Arg Ala Met Leu Asn
      195        200        205
Ser Asn Asp Val Ser Glu Tyr Leu Lys Ile
      210        215

```

<210> 6083

<211> 358

<212> DNA

<213> Homo sapiens

<400> 6083

```

nnacgcgtga ggggacaggc tgagaaaaaa gaattacgac ataaaataga tgaaatggaa
60
gaaaaaagaac aggagctcca ggcaaaaata gaagctttgc aagctgataa tgatttcacc
120
aatgaaagcg taacagcttt acaagagaag ctgatcgtcg aagggcattc aaccaaagcg
180
gtagaagaaa caaagctttc aaaagaaaat cagacaagag caaagaatc tgatttttca
240
gatactctga gtccaagcaa ggaaaaaagc agtgacgaca ctacagacgc ccaaatggat
300
gagcaagacc taaatgagcc tcttgccaaa gtgtcccttt taaaagatga cttgcagg
358

```

<210> 6084

<211> 101

<212> PRT

<213> Homo sapiens

<400> 6084

```

Met Glu Glu Lys Glu Gln Glu Leu Gln Ala Lys Ile Glu Ala Leu Gln
  1          5          10          15
Ala Asp Asn Asp Phe Thr Asn Glu Arg Leu Thr Ala Leu Gln Glu Lys
      20        25        30
Leu Ile Val Glu Gly His Leu Thr Lys Ala Val Glu Glu Thr Lys Leu
      35        40        45
Ser Lys Glu Asn Gln Thr Arg Ala Lys Glu Ser Asp Phe Ser Asp Thr
      50        55        60
Leu Ser Pro Ser Lys Glu Lys Ser Ser Asp Asp Thr Thr Asp Ala Gln

```

65 70 75 80
 Met Asp Glu Gln Asp Leu Asn Glu Pro Leu Ala Lys Val Ser Leu Leu
 85 90 95
 Lys Asp Asp Leu Gln
 100

<210> 6085

<211> 2307

<212> DNA

<213> Homo sapiens

<400> 6085

nntccggatc agttcgagtg cctctaccca taccctgttc atcacccatg tgacagacag
 60
 agccagggtg accttgacaa tcccgactac gagagggttc ctaatttcca aaatgtggtt
 120
 ggttacgaaa cagtgggttg ccctggtgat gttctttaca tcccaatgta ctggtggcat
 180
 cacatagagt cattactaaa tgggggggatt accatcactg tgaacttctg gtataagggg
 240
 gctcccaccc ctaagagaat tgaatatcct ctcaaagctc atcagaaagt ggccataatg
 300
 agaaacattg agaagatgct tggagaggcc ttggggaacc cacaagagggt ggggcccttg
 360
 ttgaacacaa tgatcaaggg ccgatacaac tagcctgccca ggggtcaagg cctcctgccca
 420
 ggtgactgct atcccgtcca caccgcttca ttgatgagga caggagactc caagcgctag
 480
 tattgcacgc tgcacttaat ggactggact cttgccatgg cccaggagtc aggtgttttg
 540
 agcgaggcag ggcagttggc actccactcc tatttggagg gacttcatac ccttgccctc
 600
 tgtgcccttg caccttctct ctctgcccc cgcctaaagt cctgcattca gtgtgtggag
 660
 cccagcttt tggttgtcat catgtctgtg tgtatgtag tctgtcaact tcggaatgtg
 720
 tgcgtgtgtg tgcattgaca cgcattgatg tatctgttcc ctgttccttc tgggtcaggc
 780
 tgtcacttcc ggtcttcagc cctatctcct gcaacctcag tgcctcagcc tgagagagag
 840
 atgagatgct cttggactcc ccaactgcac tgggctgcag ggccagagct agtctgacca
 900
 ttaggtcagt ctgcctcctg acagtttttg cgtagtcaag ctctaggcgg tatgggaatg
 960
 gctaccggga ctctaattgg gtgaaagaga ggggaggctt gcctttgaga gcctatatag
 1020
 ccttctgtg agagaggatt agatagggtt ccaactgggc ctacaagctc aagccataca
 1080
 taaaaggacc ttgggacata agaaccaatg attgtgcata agttctaaat tagagacaca
 1140
 tatagtcttct ctctttcagc accagctctt gccctatgc tgggtaccaa gggagtctc
 1200
 ctagctgtgg ctctcttagg ttctaggggt gcaagcctct gtgtgtttgt ttgtgtgtgt
 1260

ctgtgtgtgc gtatcacact aggggtgcaa gcctctgggt gtgtgtgtgt gtgtgcgtgc
 1320
 gtgtgtgtgt gtgtgtccgt gtgtgtgtgt gtgtgtgtcc aactggcca gcctccctac
 1380
 ttaccaaggt tctccactgc ttaccttttc cagtgggaca gtacagtgtg agcccccggt
 1440
 aagtactgcc tgacctatcc taagctttta cacttggatt ttagccatca tatgttggcc
 1500
 aggtctcact gcagcctgcc cgaggctaac tggctagagc ctccagccct atgatgctcc
 1560
 ctgccaggc catatccttt attcctgctg agcttctctg ctgaatagat gaaatggggt
 1620
 caagcccagg cagctcatc actacctgtg atccacctca gggcacgggc aaacacatag
 1680
 gcttgctgt taaagccagc tcctctgcca gaccccggtg taatgtgcca caacaccctc
 1740
 aatagtcagg gcaactggtg gagcatggaa gtcgaatttc cttttctgtt aggagctact
 1800
 cctgggaacc cctctcaggg ctgcagctta caggtgggca gctgtgattg cacaacttga
 1860
 agggccatca ttcacatcta ttcagtggga gtgggggtccc tgggattggg cagtgtggtg
 1920
 gccctgtgtc tcctcacctc tgctcctgtc ttcacacct tctctctgga agggaagagg
 1980
 agttggaagg tctctggttt tcttttcttt ttttttttt ttgccaaagg tttacttcca
 2040
 gcactgtgagc tctggctctc acccctgaag ctcagttata gtgcactgat gaactgagag
 2100
 gatgcgtgtg gatgtgtgtg catgcctgag tgcgtttttt ggggaggggt gtttattttt
 2160
 agtaccocat tctggggttc tctgatgcag tgtggatgtg aagatatggt accttctcaa
 2220
 gtgtagctct ttc aaatata gtcaatgctg ggaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2280
 aaaaaaaaaa aaaaaaaaaa aaaaaaa
 2307

<210> 6086

<211> 84

<212> PRT

<213> Homo sapiens

<400> 6086

Met	Leu	Gly	Thr	Lys	Gly	Val	Leu	Leu	Ala	Val	Ala	Ser	Leu	Gly	Ser
1				5				10					15		
Arg	Gly	Ala	Ser	Leu	Cys	Val	Phe	Val	Cys	Val	Cys	Leu	Cys	Val	Arg
			20					25					30		
Ile	Thr	Leu	Gly	Val	Gln	Ala	Ser	Gly	Cys	Val	Cys	Val	Cys	Ala	Cys
			35				40					45			
Val	Cys	Val	Cys	Val	Ser	Val	Cys	Val	Cys	Val	Cys	Val	His	Thr	Gly
			50			55					60				
Gln	Pro	Pro	Tyr	Leu	Pro	Arg	Phe	Ser	Thr	Ala	Tyr	Leu	Phe	Gln	Trp
65					70				75					80	
Asp	Ser	Thr	Val												

<210> 6087
<211> 1506
<212> DNA
<213> Homo sapiens

<400> 6087
ncggcccccg ggagctgtgc tctatggagc tattgcgcc gtgggtggtc gcgggcatg
60
cggggctgcc agctcctcgg gcttcgtagc tcttgcccg gggacctact aagtgtcgg
120
ctcttgtccc aagagaagcg ggcagcggaa acgcactttg ggtttgagac tgtgtcggaa
180
gaggagaagg ggggcaaagt ctatcagggtg tttgaaagtg tggctaagaa gtatgatgtg
240
atgaatgata tgatgagtct cggcatccat cgtgtttgga aggatttgct gctctggaag
300
atgcaccgcg tgcccgggac ccagctgtct gacatggctg gaggcacagg tgacattgcg
360
ttccgggtcc ttaattatgt tcagtcaccg catcagagaa aacagaagag gcagttaagg
420
gcccaacaaa atttatcctg ggaagaaatt gccaaagagt accagaatga agaagattcc
480
ttgggcgggt ctctgtctgt ggtgtgtgac atcaacaagg agatgctaaa ggttggaagg
540
cagaaagcct tggctcaagg atacagagct ggacttgcac gggatttagg agatgctgaa
600
gaactgcctt ttgatgatga caagtttgat atttacacca ttgccttttg gatccggaat
660
gtcacacaca ttgatcaggc actccaggaa gctcatcggg tgctgaaacc aggaggacgg
720
tttctctgtc tgggaatttag ccaagtgaac aatccctca tatccaggct ttatgatcta
780
tatagcttcc aggtcatccc tgcctggga gaggtcatcg ctggagactg gaagtcctat
840
cagtaccttg tagagagtat ccgaaggttt ccgtctcagg aagagttcaa ggacatgata
900
gaagatgcag gctttcaca ggtgacttac gaaagtctaa catcaggcat tgtggccatt
960
cattctggct tcaaacttta attcctttcc tatcatggag catgaaccag tcatatcctg
1020
ttgaaagcct ggaactgaag gataatctgg caaatgagac agcagcagag catctcctct
1080
taaggatacg tgccttggac tcatgtttga atcgaacagt ctcaaagtgg aagaacaaat
1140
tcttgtcact tttttacagc tttctttgga gctgcttcag tccatctccc agaggcattt
1200
ggctctgtatc ttgtctcaac tgctaatttc tcttggtgtg aggggtgtgtg gtttaaggtag
1260
aaccaccctt aaagctcagt tttgaagtga gtgtatttat agcttctctg ctggtgctgc
1320
cttctagagg gatgatagat catttgaacc caatgacaat ttttaaccag aaaatttaat
1380

tgtacctgaa tcaacctttc agcctaggac gaagtctagg cccaagtcag agtattaatg
 1440
 atcatgagaa ttgtgtgctg aaccagtaaa cgagtttacc tttaaaaaaa aaaaaaaaaa
 1500
 aaaaaa
 1506

<210> 6088
 <211> 326
 <212> PRT
 <213> Homo sapiens

<400> 6088
 Xaa Ala Pro Gly Ser Cys Ala Leu Trp Ser Tyr Cys Gly Arg Gly Trp
 1 5 10 15
 Ser Arg Ala Met Arg Gly Cys Gln Leu Gly Leu Arg Ser Ser Trp
 20 25 30
 Pro Gly Asp Leu Leu Ser Ala Arg Leu Leu Ser Gln Glu Lys Arg Ala
 35 40 45
 Ala Glu Thr His Phe Gly Phe Glu Thr Val Ser Glu Glu Glu Lys Gly
 50 55 60
 Gly Lys Val Tyr Gln Val Phe Glu Ser Val Ala Lys Lys Tyr Asp Val
 65 70 75 80
 Met Asn Asp Met Met Ser Leu Gly Ile His Arg Val Trp Lys Asp Leu
 85 90 95
 Leu Leu Trp Lys Met His Pro Leu Pro Gly Thr Gln Leu Leu Asp Met
 100 105 110
 Ala Gly Gly Thr Gly Asp Ile Ala Phe Arg Phe Leu Asn Tyr Val Gln
 115 120 125
 Ser Gln His Gln Arg Lys Gln Lys Arg Gln Leu Arg Ala Gln Gln Asn
 130 135 140
 Leu Ser Trp Glu Glu Ile Ala Lys Glu Tyr Gln Asn Glu Glu Asp Ser
 145 150 155 160
 Leu Gly Gly Ser Arg Val Val Val Cys Asp Ile Asn Lys Glu Met Leu
 165 170 175
 Lys Val Gly Lys Gln Lys Ala Leu Ala Gln Gly Tyr Arg Ala Gly Leu
 180 185 190
 Ala Trp Val Leu Gly Asp Ala Glu Glu Leu Pro Phe Asp Asp Asp Lys
 195 200 205
 Phe Asp Ile Tyr Thr Ile Ala Phe Gly Ile Arg Asn Val Thr His Ile
 210 215 220
 Asp Gln Ala Leu Gln Glu Ala His Arg Val Leu Lys Pro Gly Gly Arg
 225 230 235 240
 Phe Leu Cys Leu Glu Phe Ser Gln Val Asn Asn Pro Leu Ile Ser Arg
 245 250 255
 Leu Tyr Asp Leu Tyr Ser Phe Gln Val Ile Pro Val Leu Gly Glu Val
 260 265 270
 Ile Ala Gly Asp Trp Lys Ser Tyr Gln Tyr Leu Val Glu Ser Ile Arg
 275 280 285
 Arg Phe Pro Ser Gln Glu Glu Phe Lys Asp Met Ile Glu Asp Ala Gly
 290 295 300
 Phe His Lys Val Thr Tyr Glu Ser Leu Thr Ser Gly Ile Val Ala Ile
 305 310 315 320
 His Ser Gly Phe Lys Leu

325

<210> 6089
<211> 4211
<212> DNA
<213> Homo sapiens

<400> 6089
ncgggcgact cgcgggtgtg acgttgaaga tgcggcctt ctgagccgac tgcggtggtc
60
aagagtgtaa cacagccagc ctgaagact tccctctgag ttggaatgat aatgaccgaa
120
tcccagagaag ttatagactt agacccccca gctgagactt cccaggagca ggaagacctt
180
ttcatagtga aggtggaaga agaagactgc acctggatgc aggagtacaa cccgccaaacg
240
tttgagactt tttaccagcg cttcaggcac ttccagtacc atgaggcttc aggaccccg
300
gaggctctca gccaaactcg ggtgctctgc tgtgagtggc tgaggcccg gctgcacacg
360
aaggagcaga tcctggagct gctggtgctg gagcagttcc tgaccatcct gcctgaagag
420
ttccagccct gggtgaggga acatcacctt gaaagtggag aagaggcggg gcccgatgata
480
gaaaatatac agcgagaact tgaggaacgc agacagcaga ttgttgcttg ccctgatgtg
540
cttcctcgga agatggcaac acctggagca gtgcaggagt cctgcagccc ccatccctg
600
accgtggaca cccagcctga gcaagcgcca cagaagcctc gtctcctgga ggaaaatgcc
660
cttcctgttc tccaagtctc ttcccttccc ctgaaggaca gccaggagct gacagcttca
720
cttctctcaa ctgggtccca gaagtgtgtg aaaattgaag aggtggctga tgtggctgta
780
tccttcatcc tggaggaatg ggggcatttg gaccagtccc agaagtcctt ttatagggat
840
gacaggaagg agaactatgg gagtattact tccatgggtt atgagtccag ggacaatatg
900
gagctcatag tgaagcagat ttctgatgac tctgaatcac actgggtggc gccagaacac
960
accgaaagga gcgttcctca ggatccagac ttgcagaag tcagtgaact taaaggcatg
1020
gtacaaaggt ggcagggtcaa cccactgtg gggaaatcaa ggcagaatcc ttcccagaaa
1080
agggatctgg atgcaatcac agacatcagc cctaagcaaa gcacacatgg cgagagaggg
1140
cacagatgca gcgattgtgg caaattcttc ctccaagcct caaactttat tcagcatcgg
1200
cgcateccaca ctggagaaaa accgtttaag tgcggagaat gtgggaagag ctacaatcag
1260
cgggtgcacc tcaccagca ccagcgcgtc cacacagggg agaaacccta caaatgtcag
1320
gtgtgcggaa aggccttccg ggtgagttcc cacctgggtc agcaccacag tgtccacagc
1380

5269

ggagagaggc cctatggctg caatgagtgt gggaagaact tcggtcgcca ttgcgcatctg
1440
atcgaacacc taaaacgcca cttcagggag aaatcccaga gatgcagtga caaaagaagt
1500
aagaacacaa aattaagtgt taagaagaaa atttcagaat attcagaagc agacatggaa
1560
ctatctggaa aaacccaaag aaatgtttct caagtccaag attttgagga aggctgtgag
1620
tttcaaggca agctggatag aaagcaggga attcccatga aagagatact aggacaacca
1680
tcttcaaaga ggatgaacta cagtgaagtc ccatatgtcc acaaaaaatc ctccactgga
1740
gagagaccac ataaatgtaa cgagtgtggg aaaagcttca ttcagagtgc acatcttatt
1800
caacatcaaa gaatacacac tggggagaaa ccattcaggt gtgagggaatg tgggaaaagc
1860
tacaaccaac gcgtgcacct aactcagcat cagcgcgtcc acacagggtga gaagccctac
1920
acctgtccct tatgtgggaa agccttcaga gtgagggtccc acctgttca gcatcagagc
1980
gtgcacagtg gggagagacc cttcaagtgt aacgaatgtg ggaaaggctt tgggaggcgt
2040
tcccacctgg ctggacatct tcgactccac tcccagaga aatcccatca gtgtcgtgaa
2100
tgtggggaaa tcttttttca gtacgttagc ctaattgaac atcaggtgct ccacatgggt
2160
cagaaaaatg aaaaaaatgg catctgtgag gaagcatata gttggaactt gacagtgatt
2220
gaagacaaga agattgagtt acaagagcag ccttatcagt gtgatatactg tggaaaagcc
2280
tttggttata gctcagacct cattcagcat tacagaactc atacagcaga gaagccctat
2340
caatgtgata tatgtagaga aaatgttggc cagtgttccc acaccaaaca acatcaaaaa
2400
atctactcca gcacaaaatc ccatcaatgt catgaatgtg gcagaggctt cactctgaag
2460
tcacatctta atcaacatca gagaatccat actggtgaga aaccttttca atgtaaagaa
2520
tgtggaatga atttcagctg gagttgtagc ctctttaaac acctgagaag ccatgagagg
2580
acagatccca taaatacctt aagtgtagag gggctctctgt tgtagaatag ctcttaattt
2640
tagagaaacc ttcctggagg gaaaccatac tcctataatg agcaaagtaa caacttcaag
2700
catttttcca gcgttaccat caaactcaca aataggttga aatcctttag ttataactca
2760
gcctttagga acaccggaga acccacaata atagaaatct tttcgtgttc cccattgaga
2820
aatgctttag ttagcatctt catgcttgga aatctagaca agaagagaat ccatggatgg
2880
acatggtcga ggaattcgga aagcctgcag ttgacattca gtcttcactt gaaactcaaa
2940
actgacacta ggaacagctt catgagttca gtagaagtaa gctttatttg tagcttctgc
3000

cttgtttgac ggcgtatcta ttcaggggaag cgcacagtaa aagaattcct tagcatgatg
 3060
 tctgttttgg tacctcagca atgaaccttt tctagaaatt attattccaa ccactagaat
 3120
 accctagtca ctattccac tttgagcatt aacctcttg aaaagaaatg gacttaaagt
 3180
 atctctgttt tggcaaaatt cagggttcagg ggctggatgg tatgtgttgc tgcctgctta
 3240
 ttcaatccac cacttctctg tgaaacactc taccttgttt ttggtttgat tctactgatg
 3300
 tcagggttta gccggtagaa ggagtagttc agtttgtcaa ttcaggagaa actgtactgg
 3360
 tcagtcacat cttacggcga agggagaggg acctagggg agcagagaag acaggcaaag
 3420
 ttgtggactg tttgatcttg tattaccac aggaatgagg gcagctaaac ccatagaagg
 3480
 agttggacca aggcgaatta cgagtcctgg tcccagcagt atgtgtgctg acttctgggt
 3540
 gcccagaaa tagacctc ctgtagagtg gtgatataca gaatgagttt cagtttgcac
 3600
 tgtagctggg attgaaagta atcagtcacg agcaggcagg caggaggtcc tgttagccct
 3660
 gccttcagg aaggttgggg tgggagtttt gagggtgaaa gaggatgaca tgtgtgagag
 3720
 agttctgagc ctgtttgcta gggagagtga gtgagtgtc ttgggactg ctcaggccgt
 3780
 ttctgtgac ttgcctggct tacaataaat gccaataaa tatttgttga ccatatgtgt
 3840
 tgtactgt ggtgcctgt ccagtcacct ctaccaagct gagaccccca tcccagctg
 3900
 ctctgagttt gggctgcaag tgctcacagc tcttgttctc cagaaactgg agaattgccc
 3960
 tcaggagatg agagccatct cactcaccc aggagtcact tctctctac accccaacac
 4020
 ctggttcatt tgattaaagc ggagaaaact ccagggtgct atgactgtc ttggaccctt
 4080
 ggatcaggcc aagctagact tttctgagc cttcatccgt gctaagctct ctccttctc
 4140
 tatcctgttt cattcctcc ctcaaaggcg tttcccaaat aaatcacact gtcaatcaca
 4200
 tggttctgaa a
 4211

<210> 6090

<211> 839

<212> PRT

<213> Homo sapiens

<400> 6090

Met	Ile	Met	Thr	Glu	Ser	Arg	Glu	Val	Ile	Asp	Leu	Asp	Pro	Pro	Ala
1			5				10				15				
Glu	Thr	Ser	Gln	Glu	Gln	Glu	Asp	Leu	Phe	Ile	Val	Lys	Val	Glu	Glu
		20					25					30			
Glu	Asp	Cys	Thr	Trp	Met	Gln	Glu	Tyr	Asn	Pro	Pro	Thr	Phe	Glu	Thr

35	40	45
Phe Tyr Gln Arg Phe Arg His Phe Gln Tyr His Glu Ala Ser Gly Pro		
50	55	60
Arg Glu Ala Leu Ser Gln Leu Arg Val Leu Cys Cys Glu Trp Leu Arg		
65	70	75
Pro Glu Leu His Thr Lys Glu Gln Ile Leu Glu Leu Leu Val Leu Glu		
85	90	95
Gln Phe Leu Thr Ile Leu Pro Glu Glu Phe Gln Pro Trp Val Arg Glu		
100	105	110
His His Pro Glu Ser Gly Glu Glu Ala Val Ala Val Ile Glu Asn Ile		
115	120	125
Gln Arg Glu Leu Glu Glu Arg Gln Gln Ile Val Ala Cys Pro Asp		
130	135	140
Val Leu Pro Arg Lys Met Ala Thr Pro Gly Ala Val Gln Glu Ser Cys		
145	150	155
Ser Pro His Pro Leu Thr Val Asp Thr Gln Pro Glu Gln Ala Pro Gln		
165	170	175
Lys Pro Arg Leu Leu Glu Glu Asn Ala Leu Pro Val Leu Gln Val Pro		
180	185	190
Ser Leu Pro Leu Lys Asp Ser Gln Glu Leu Thr Ala Ser Leu Leu Ser		
195	200	205
Thr Gly Ser Gln Lys Leu Val Lys Ile Glu Glu Val Ala Asp Val Ala		
210	215	220
Val Ser Phe Ile Leu Glu Trp Gly His Leu Asp Gln Ser Gln Lys		
225	230	235
Ser Leu Tyr Arg Asp Asp Arg Lys Glu Asn Tyr Gly Ser Ile Thr Ser		
245	250	255
Met Gly Tyr Glu Ser Arg Asp Asn Met Glu Leu Ile Val Lys Gln Ile		
260	265	270
Ser Asp Asp Ser Glu Ser His Trp Val Ala Pro Glu His Thr Glu Arg		
275	280	285
Ser Val Pro Gln Asp Pro Asp Phe Ala Glu Val Ser Asp Leu Lys Gly		
290	295	300
Met Val Gln Arg Trp Gln Val Asn Pro Thr Val Gly Lys Ser Arg Gln		
305	310	315
Asn Pro Ser Gln Lys Arg Asp Leu Asp Ala Ile Thr Asp Ile Ser Pro		
325	330	335
Lys Gln Ser Thr His Gly Glu Arg Gly His Arg Cys Ser Asp Cys Gly		
340	345	350
Lys Phe Phe Leu Gln Ala Ser Asn Phe Ile Gln His Arg Arg Ile His		
355	360	365
Thr Gly Glu Lys Pro Phe Lys Cys Gly Glu Cys Gly Lys Ser Tyr Asn		
370	375	380
Gln Arg Val His Leu Thr Gln His Gln Arg Val His Thr Gly Glu Lys		
385	390	395
Pro Tyr Lys Cys Gln Val Cys Gly Lys Ala Phe Arg Val Ser Ser His		
405	410	415
Leu Val Gln His His Ser Val His Ser Gly Glu Arg Pro Tyr Gly Cys		
420	425	430
Asn Glu Cys Gly Lys Asn Phe Gly Arg His Ser His Leu Ile Glu His		
435	440	445
Leu Lys Arg His Phe Arg Glu Lys Ser Gln Arg Cys Ser Asp Lys Arg		
450	455	460
Ser Lys Asn Thr Lys Leu Ser Val Lys Lys Lys Ile Ser Glu Tyr Ser		

465 470 475 480
 Glu Ala Asp Met Glu Leu Ser Gly Lys Thr Gln Arg Asn Val Ser Gln
 485 490 495
 Val Gln Asp Phe Gly Glu Gly Cys Glu Phe Gln Gly Lys Leu Asp Arg
 500 505 510
 Lys Gln Gly Ile Pro Met Lys Glu Ile Leu Gly Gln Pro Ser Ser Lys
 515 520 525
 Arg Met Asn Tyr Ser Glu Val Pro Tyr Val His Lys Lys Ser Ser Thr
 530 535 540
 Gly Glu Arg Pro His Lys Cys Asn Glu Cys Gly Lys Ser Phe Ile Gln
 545 550 555 560
 Ser Ala His Leu Ile Gln His Gln Arg Ile His Thr Gly Glu Lys Pro
 565 570 575
 Phe Arg Cys Glu Glu Cys Gly Lys Ser Tyr Asn Gln Arg Val His Leu
 580 585 590
 Thr Gln His Gln Arg Val His Thr Gly Glu Lys Pro Tyr Thr Cys Pro
 595 600 605
 Leu Cys Gly Lys Ala Phe Arg Val Arg Ser His Leu Val Gln His Gln
 610 615 620
 Ser Val His Ser Gly Glu Arg Pro Phe Lys Cys Asn Glu Cys Gly Lys
 625 630 635 640
 Gly Phe Gly Arg Arg Ser His Leu Ala Gly His Leu Arg Leu His Ser
 645 650 655
 Arg Glu Lys Ser His Gln Cys Arg Glu Cys Gly Glu Ile Phe Phe Gln
 660 665 670
 Tyr Val Ser Leu Ile Glu His Gln Val Leu His Met Gly Gln Lys Asn
 675 680 685
 Glu Lys Asn Gly Ile Cys Glu Glu Ala Tyr Ser Trp Asn Leu Thr Val
 690 695 700
 Ile Glu Asp Lys Lys Ile Glu Leu Gln Glu Gln Pro Tyr Gln Cys Asp
 705 710 715 720
 Ile Cys Gly Lys Ala Phe Gly Tyr Ser Ser Asp Leu Ile Gln His Tyr
 725 730 735
 Arg Thr His Thr Ala Glu Lys Pro Tyr Gln Cys Asp Ile Cys Arg Glu
 740 745 750
 Asn Val Gly Gln Cys Ser His Thr Lys Gln His Gln Lys Ile Tyr Ser
 755 760 765
 Ser Thr Lys Ser His Gln Cys His Glu Cys Gly Arg Gly Phe Thr Leu
 770 775 780
 Lys Ser His Leu Asn Gln His Gln Arg Ile His Thr Gly Glu Lys Pro
 785 790 795 800
 Phe Gln Cys Lys Glu Cys Gly Met Asn Phe Ser Trp Ser Cys Ser Leu
 805 810 815
 Phe Lys His Leu Arg Ser His Glu Arg Thr Asp Pro Ile Asn Thr Leu
 820 825 830
 Ser Val Glu Gly Ser Leu Leu
 835

<210> 6091

<211> 1336

<212> DNA

<213> Homo sapiens

<400> 6091

ttttttcttt tttttttttt tccataaaaa gcactttggt taattttatc aaatcgatct
60
gtacaaaagt tagcggttgc ttggtcagaaa ggagtgaagg cagcagggga gtgaggggtgc
120
gtcctccgaa cgcggtgcc aaggagacgc tgcataaaac gggctctgca cggctcccg
180
ccccacccc cccccccaga gaaatagaag cagaggcatt atcttttttt tctacaaaaa
240
agtaggaaaa gtagaaaaag tacaagaag caacttctcg gctgtgttta agtttataaa
300
gtttaaaggc acaagtttcc gtgaagtagg cgctattgta tgctctatgc tcagcacaca
360
ggggaagcag tgcaggtgaa tcaggtatga ctgctctaga actgaggccc taacgacgtt
420
tagtgagaaa ggttagttt cacagcttgg taggtggcac tgggtgcctgc gagccaagat
480
cacttttgaa gccaccactt tccaggaatt cctgtgtcct gtgtcctacc acatggcaca
540
gtcatgggca aggacccagg aattctctgt tcctatgtgt cctaccacgt ggcacagtcg
600
gggacagggc cggagtcctg ctccccaaac cccaaactgg tactgggtgc tggggcaccc
660
caacctgatc agagatgtca caaggcaggt ccttctcct cctcgggtt ttcgggttgc
720
aagctcgagg catgaggggc ccagtcctcc caggacctt gggacctccg ggccctccag
780
ggcggcctcc cataagccga gcaacgagca acgtgatgcc ggccaacagc tgcaactcca
840
cctcctgcct gccctcaagg gaagcttccc agcttccgtt ttgtcttaa ttctactctt
900
tgccgaatt acctcattaa ttaaagataa aataacacag aacataaata catctttaac
960
agctttcaga agaaacacat ttaagcttca aaaataaaaa ttatcaaaaa cataaaaaata
1020
aaagagagat gtgttcacat cagccagccc tcgctgtgagc gcactctgcc agcaaggaga
1080
cacctcagat ctgacaggca ggtcccgag atgctcgagt agactcatcc cagtctgcgg
1140
acagacaccc cggatcccg acagcccggt cagccgttgt cgagggaatg tggccttgag
1200
tgcaggggct ctcggcgcca agaccggcct ggacctcaca gcgccctgca aggccctgc
1260
caccctctcc ttggtcctt gggctgtgct gccgtttctc ctctaccgag atgcaaagcg
1320
aaggtgctgg tgccgc
1336

<210> 6092

<211> 118

<212> PRT

<213> Homo sapiens

<400> 6092

Met Ala Gln Ser Trp Ala Arg Thr Gln Glu Phe Leu Cys Pro Met Cys

1	5	10	15
Pro Thr Thr Trp His Ser Arg Gly Gln Gly Arg Ser Pro Ala Ser Gln			
	20	25	30
Thr Pro Asn Trp Tyr Trp Val Leu Gly His Pro Asn Leu Ile Arg Asp			
	35	40	45
Val Thr Arg Gln Val Pro Ser Pro Pro Ser Gly Phe Arg Leu Pro Ser			
	50	55	60
Ser Arg His Glu Gly Pro Ser Pro Pro Arg Asp Leu Gly Thr Ser Gly			
65	70	75	80
Pro Ser Arg Ala Ala Ser His Lys Pro Ser Asn Glu Gln Arg Asp Ala			
	85	90	95
Gly Gln Gln Leu Gln Leu His Leu Leu Pro Ala Leu Lys Gly Ser Phe			
	100	105	110
Pro Ala Ser Val Leu Ser			
115			

<210> 6093

<211> 1998

<212> DNA

<213> Homo sapiens

<400> 6093

```

tttttttttt tttttttttt tttttttttt ttttttttcc ataaaaatgg atttattgcc
60
aaactttaag aaagggcgtt cataagcaga agacacagaa tgccaccctc ctcaaggagg
120
caagcacgga atgccacctt cctcaagcac gcaagctagg caggccctgc acgttctcac
180
tcctctccca gaagccagct tcctgcctag ggcccagcct gctaaaggat ggaaattaat
240
agcatttggt cacttgaggt ggccccagag ctacttgctt acccaccagg cccaggggag
300
agtggctggg cctcaacctg tgacctacat gcagggtctc tgcacccaca gactctgccc
360
tcagtcacgc tgctgcagtt agctacttga cacaggaggg aactgaggct ccaattcctg
420
gcagtaggtg gcttggtctaa agccccagcc agccatggct gctggtgggg gaaggctggt
480
cctaaggcaa gatggcaggg gatcacatga ctgggcaact gatgtccttc ttgctcttgt
540
cctggggcag atggagggaa agccagactg tggcatgggg gccagtttg cacaaggagg
600
ctgatggggg ctcccgaacc agtgcattgc tgctcacctc tgctccggcc ccacgcagcc
660
cagagaagac atctgccctt cctgacctt gactactacc tcaagaacaa agtgacagta
720
caataacgat aacgaaggca ttgacctgtg cagcaggcct cagtgggggt ggggaacaga
780
gcagaaaggc cagggcatgt tgctgtgacc ccccccttc tctctttcag taaacaaaag
840
tgacatgca gaaatctggg caggtcctat cggaagctgc tctcacccca gaggccccag
900
ggagagtggc tggacctcgg gagccagggc ctctgcacct acaggtcttg cctcagtc
960

```

agctgctgca gcacgatgga gactggatgt gcccctagag tcagggacaa tgtgggggag
 1020
 aggctgggag aggaccaggg tgcagggatg gaccaggaaa gggaaagaag aaaatgtctc
 1080
 ttctctaga aagttacagg agagcagccc atctggggct tgaaggcggg gaagtggctt
 1140
 cggattccaa cataccccta tcagcatttg aagaaatgac tgggatactg gacctgtttc
 1200
 ggctgagaag gaaccacaga gatccagata aatccccatc tgaggaggca cagaagttgg
 1260
 tggggattct cttctgaagg ctgacatgat cattacaagt aagtttttct aatgtggaca
 1320
 tcagagccac tctgggatcc acctcttcag aaatatacaa ggctggacac tatccagggg
 1380
 cagagactag actaggggac cccttaaatt cctcttcac tcttgaatcc tccagaccta
 1440
 agccctccaa tcatagctca ctgagaggaa ggggctgcag aaaatgtcct tgttttgcaa
 1500
 aaaaaggaaa cagggccaaa gagagagagg ccacacagct aatgtcctcc tcacaaagag
 1560
 gcctctcacc tccctcaaga ggctccagct gggctcctacg ttccccccaa ctgaggggatg
 1620
 aacctagagc ctggacccaa ggcctctgca gctactcaga ataggtggga ggaggggctg
 1680
 gctttgaggg tgccttagcc atgaggctct ttgcctagga atagctggag atgggagctg
 1740
 cagggggctc agctgtgctg tattcagaag tcaggaatgt aaactactgg ggatggggaa
 1800
 cagagatgat gtcattccca gataccccaa ctgccgcccc caaagccctg gggcagtttg
 1860
 gaacgaccac acaaacacat aggtcccagc gtgtgtgctc ccagccccag ccccgaccca
 1920
 gagccagggc cagatagcca gcagtagccc tgggtggcac ctggcaccac tggccagagc
 1980
 agagtaggaa ggacgccc
 1998

<210> 6094

<211> 136

<212> PRT

<213> Homo sapiens

<400> 6094

Met	Ile	Met	Ser	Ala	Phe	Arg	Arg	Glu	Ser	Pro	Pro	Thr	Ser	Val	Pro
1			5					10					15		
Pro	Gln	Met	Gly	Ile	Tyr	Leu	Asp	Leu	Cys	Gly	Ser	Phe	Ser	Ala	Glu
		20					25					30			
Thr	Gly	Pro	Val	Ser	Gln	Ser	Phe	Leu	Gln	Met	Leu	Ile	Gly	Val	Cys
	35					40					45				
Trp	Asn	Pro	Lys	Pro	Leu	Pro	Arg	Leu	Gln	Ala	Pro	Asp	Gly	Leu	Leu
	50			55				60							
Ser	Cys	Asn	Phe	Leu	Gly	Glu	Glu	Thr	Phe	Ser	Ser	Phe	Pro	Phe	Leu
65			70					75					80		
Val	His	Pro	Cys	Thr	Leu	Val	Leu	Ser	Gln	Pro	Leu	Pro	His	Ile	Val

85 90 95
 Pro Asp Ser Arg Gly Thr Ser Ser Leu His Arg Ala Ala Ala Gly
 100 105 110
 Leu Arg Ala Glu Pro Val Gly Ala Glu Ala Leu Ala Pro Glu Val Gln
 115 120 125
 Pro Leu Ser Leu Gly Pro Leu Gly
 130 135

<210> 6095
 <211> 441
 <212> DNA
 <213> Homo sapiens

<400> 6095
 naacgtctcc gccgtcggct ccgcgccgcc gccatggccg acgtggaaga cggagaggaa
 60
 acctgcgccc tggcctctca ctccgggagc tcaggctcca agtcgggagg cgacaagatg
 120
 ttctccctca agaagtggaa cgcggtggcc atgtggagct gggacgtgga gtgcgatacg
 180
 tgcgccatct gcagggtcca ggtgatggtg gtctggggag aatgtaatca ttccttcac
 240
 aactgctgta tgccctgtg ggtgaaacag aacaatcgct gccctctctg ccagcaggac
 300
 tgggtggtcc aaagaatcgg caaatgagag tggttagaag gcttcttagc gcagttgttc
 360
 agagccctgg tggatcttgt aatccagtgc cctacaaagg ctagaacact acaggggatg
 420
 aattcttcaa atagggaccg t
 441

<210> 6096
 <211> 97
 <212> PRT
 <213> Homo sapiens

<400> 6096
 Met Ala Asp Val Glu Asp Gly Glu Glu Thr Cys Ala Leu Ala Ser His
 1 5 10 15
 Ser Gly Ser Ser Gly Ser Lys Ser Gly Gly Asp Lys Met Phe Ser Leu
 20 25 30
 Lys Lys Trp Asn Ala Val Ala Met Trp Ser Trp Asp Val Glu Cys Asp
 35 40 45
 Thr Cys Ala Ile Cys Arg Val Gln Val Met Val Val Trp Gly Glu Cys
 50 55 60
 Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val Lys Gln Asn
 65 70 75 80
 Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val Gln Arg Ile Gly
 85 90 95
 Lys

<210> 6097
 <211> 2404

<212> DNA

<213> Homo sapiens

<400> 6097

cggtttgtgg cccgggaaaa gataatgtct gtgctgagtg aatggggcct gttccggggc
60
ctccagaacc accccatggt actgcccatc tgcagccggt ctggggatgt gatagaatac
120
ctgctgaaga accagtgggt tgtccgctgc caggaaatgg gggcccagac tgccaaggct
180
gtggagtggg gggccctgga gctcagtcct tccttccacc agaagaactg gcaacactgg
240
ttttcccata ttggggactg gtgtgtctcc cggcagctgt ggtggggcca tcagattcca
300
gcctacctgg ttntantagg accatgcgca nngggagaag agnngacctg ttgggtgggc
360
ggccggtcag gggctgaggc cagagagtta gcagcggaac tgacagggag gcaaggggca
420
gagccgacct tggagaggga tcctgatgtc ctagacacat ggttttcttc tgccctgttc
480
cccttttctg ccctgggctg gccccaagag accccagacc ttgctcgttt ctacccctg
540
tcacttttgg aaacgggcag cgaccttctg ctgttctggg tgggccgcat ggtcatgttg
600
gggaccacgc tcacagggca gctgcccttc agcaagggtc ttcttcaccc catgggttcg
660
gacaggcagg gccggaagat gagcaagtcc ctggggaatg tgctggaccc aagagacatc
720
atcagtgggg tggagatgca gttgctgcag gaaaagctga gaagcggaaa tttggaccct
780
gcagagctgg ccattgtggc tgcagcacag aaaaaggact ttcttcacgg gatccctgag
840
tgtgggacag atgccctgag attcacactc tgctcccatg gagttcaggc gggcgacttg
900
cacctgtcag tctctgaggt ccagagctgc cgacatttct gcaacaagat ctggaatgct
960
cttcgcttta tcctcaatgc tttaggggag aaatttgtgc cacagcctgc tgaggagctg
1020
tctccctcct ccccgatgga tgccctggatc ctgagccgcc ttgccctggc tgcccaggag
1080
tgtgagcggg gcttccctac ccgagagctc tcgctcgtea ctcatgccct gcaccacttc
1140
tggcttcaca acctctgtga cgtctacctg gaggtgtgta agcccgtgct gtggcactcg
1200
ccccgcccc tggggcccc tcaggtcctg ttctcctgcg ctgacctcg cctccgctc
1260
ctggccccac tgatgccctt cctggctgaa gagctctggc agaggctgcc cccagggcct
1320
ggttgcccc ctgccccag catctcggtt gccccctacc ccagcgctg cagcttgagg
1380
cactggcgcc agccagagct ggagcggcgc ttctcccggg tccaagaggt cgtgcaggtg
1440
ctaagggtc tccgagccac gtaccagctc accaaagccc gggcccgagt gctgctgcag
1500

agctcagagc ctggggacca gggcctcttc gaggccttct tggagccctt gggcaccttg
 1560
 ggctactgtg gggctgtggg cctgttacct ccaggcacag cagctccctc cggctggggc
 1620
 caggctccac tcagtgcac ggcctcaagtc tacatggagc tgcagggcct ggtggaccgc
 1680
 cagatccagc tacctctgtt agccgcccga aggtacaagt tgcagaagca gcttgacagc
 1740
 ctcacagcca ggaccccatc agaaggggag gcagggactc agaggcaaca aaagctttct
 1800
 tccctccagc tgggaattgtc aaaactggac aaggcagcct ctcacctccg gcagctgatg
 1860
 gatgagcctc cagccccagg gagcccgagg ctctaactca tcaccccat cagttttcct
 1920
 cctctcaga cctgtctttg aggacaaaca gatttgtcag ctgtcagggt gcagtgaggc
 1980
 gtcagagact atgtggtcca tcgccttcat tgtgtaaag aggacacaga ctggcttggt
 2040
 cgcagtgact gtggtgtcct tgagatgtc acattactgc ccggcctgcc tcccacctgg
 2100
 aagtctggga atgaggagat tgagataaac ttttgaaatc ccaaactatgt ctgtttatgg
 2160
 ctctttggtc cctttgtctc ccagtgtgga cttttgtgct tctgagttgt cccctgagag
 2220
 cttggtctgg gaaaagagga ggaggggtcc tctactggagg aagaggaacc tttcagtcac
 2280
 ggggtaggta atgggacagt ggttccggtt ctacctcctt tcttgactg acaggtgcct
 2340
 ggctttttgc agggtccttc tctccaatt ctcactaaat ggaaggttcc ccgtccttg
 2400
 gctt
 2404

<210> 6098

<211> 631

<212> PRT

<213> Homo sapiens

<400> 6098

Arg	Phe	Val	Ala	Arg	Glu	Lys	Ile	Met	Ser	Val	Leu	Ser	Glu	Trp	Gly
1				5				10					15		
Leu	Phe	Arg	Gly	Leu	Gln	Asn	His	Pro	Met	Val	Leu	Pro	Ile	Cys	Ser
		20					25					30			
Arg	Ser	Gly	Asp	Val	Ile	Glu	Tyr	Leu	Leu	Lys	Asn	Gln	Trp	Phe	Val
	35						40				45				
Arg	Cys	Gln	Glu	Met	Gly	Ala	Arg	Ala	Ala	Lys	Ala	Val	Glu	Ser	Gly
	50					55				60					
Ala	Leu	Glu	Leu	Ser	Pro	Ser	Phe	His	Gln	Lys	Asn	Trp	Gln	His	Trp
65				70					75				80		
Phe	Ser	His	Ile	Gly	Asp	Trp	Cys	Val	Ser	Arg	Gln	Leu	Trp	Trp	Gly
		85					90				95				
His	Gln	Ile	Pro	Ala	Tyr	Leu	Val	Xaa	Xaa	Gly	Pro	Cys	Ala	Xaa	Gly
	100						105				110				
Glu	Glu	Xaa	Thr	Cys	Trp	Val	Val	Gly	Arg	Ser	Gly	Ala	Glu	Ala	Arg

465 470 475 480
 Leu Leu Asn Gly Met Gly Pro Leu Gly Arg Arg Ala Ser Asp Gly Gly
 485 490 495
 Ala Asn Ile Gln Leu His Ala Gln Gln Leu Leu Lys Arg Pro Arg Gly
 500 505 510
 Pro Ser Pro Leu Val Thr Met Thr Pro Ala Val Pro Ala Val Thr Pro
 515 520 525
 Val Asp Glu Glu Ser Ser Asp Gly Glu Pro Asp Gln Glu Ala Val Gln
 530 535 540
 Ser Ser Thr Tyr Lys Asp Ser Asn Thr Leu His Leu Pro Thr Glu Arg
 545 550 555 560
 Phe Ser Pro Val Arg Arg Phe Ser Asp Gly Ala Ala Ser Ile Gln Ala
 565 570 575
 Phe Lys Ala His Leu Glu Lys Met Gly Asn Asn Ser Ser Ile Lys Gln
 580 585 590
 Leu Gln Gln Glu Cys Glu Gln Leu Gln Lys Met Tyr Gly Gly Gln Ile
 595 600 605
 Asp Glu Arg Thr Leu Glu Lys Thr Gln Gln Gln His Met Leu Tyr Gln
 610 615 620
 Gln Glu Gln His His Gln Ile Leu Gln Gln Gln Ile Gln Asp Ser Ile
 630 635 640
 Cys Pro Pro Gln Pro Ser Pro Pro Leu Gln Ala Ala Cys Glu Asn Gln
 645 650 655
 Pro Ala Leu Leu Thr His Gln Leu Gln Arg Leu Arg Ile Gln Pro Ser
 660 665 670
 Ser Pro Pro Pro Asn His Pro Asn Asn His Leu Phe Arg Gln Pro Ser
 675 680 685
 Asn Ser Pro Pro Pro Met Ser Ser Ala Met Ile Gln Pro His Gly Ala
 690 695 700
 Ala Ser Ser Ser Gln Phe Gln Gly Leu Pro Ser Arg Ser Ala Ile Phe
 705 710 715 720
 Gln Gln Gln Pro Glu Asn Cys Ser Ser Pro Pro Asn Val Ala Leu Thr
 725 730 735
 Cys Leu Gly Met Gln Gln Pro Ala Gln Ser Gln Gln Val Thr Ile Gln
 740 745 750
 Val Gln Glu Pro Val Asp Met Leu Ser Asn Met Pro Gly Thr Ala Ala
 755 760 765
 Gly Ser Ser Gly Arg Gly Ile Ser Ile Ser Pro Ser Ala Gly Gln Met
 770 775 780
 Gln Met Gln His Arg Thr Asn Leu Met Ala Thr Leu Ser Tyr Gly His
 785 790 795 800
 Arg Pro Leu Ser Lys Gln Leu Ser Ala Asp Ser Ala Glu Ala His Ser
 805 810 815
 Leu Asn Val Asn Arg Phe Ser Pro Ala Asn Tyr Asp Gln Ala His Leu
 820 825 830
 His Pro His Leu Phe Ser Asp Gln Ser Arg Gly Ser Pro Ser Ser Tyr
 835 840 845
 Ser Pro Ser Thr Gly Val Gly Phe Ser Pro Thr Gln Ala Leu Lys Val
 850 855 860
 Pro Pro Leu Asp Gln Phe Pro Thr Phe Pro Pro Ser Ala His Gln Gln
 865 870 875 880
 Pro Pro His Tyr Thr Thr Ser Ala Leu Gln Gln Ala Leu Leu Ser Pro
 885 890 895
 Thr Pro Pro Asp Tyr Thr Arg His Gln Gln Val Pro His Ile Leu Gln

900 905 910
 Gly Leu Leu Ser Pro Arg His Ser Leu Thr Gly His Ser Asp Ile Arg
 915 920 925
 Leu Pro Pro Thr Glu Phe Ala Gln Leu Ile Lys Arg Gln Gln Gln Gln
 930 935 940
 Arg Gln Gln Gln Gln Gln Gln Gln Gln Gln Tyr Gln Glu Leu
 945 950 955 960
 Phe Arg His Met Asn Gln Gly Asp Ala Gly Ser Leu Ala Pro Ser Leu
 965 970 975
 Gly Gly Gln Ser Met Thr Glu Arg Gln Ala Leu Ser Tyr Gln Asn Ala
 980 985 990
 Asp Ser Tyr His His Thr Ile Gln Asn Ser Asp Asp Ala Tyr Val Gln
 995 1000 1005
 Leu Asp Asn Leu Pro Gly Met Ser Leu Val Ala Gly Lys Ala Leu Ser
 1010 1015 1020
 Ser Ala Arg Met Ser Asp Ala Val Leu Ser Gln Ser Ser Leu Met Gly
 1025 1030 1035 1040
 Ser Gln Gln Phe Gln Asp Gly Glu Asn Glu Glu Cys Gly Ala Ser Leu
 1045 1050 1055
 Gly Gly His Glu His Pro Asp Leu Ser Asp Gly Ser Gln His Leu Asn
 1060 1065 1070
 Ser Ser Cys Tyr Pro Ser Thr Cys Ile Thr Asp Ile Leu Leu Ser Tyr
 1075 1080 1085
 Lys His Pro Glu Val Ser Phe Ser Met Glu Gln Ala Gly Val
 1090 1095 1100

<210> 6101
 <211> 1447
 <212> DNA
 <213> Homo sapiens

<400> 6101
 tttttttttt tttttttttt tttttttttt tttttttttt actgcaacca gtacttatgt
 60
 ttattactgt acctaatataa cagcccagcg tggtagattcc tttcactta gtagcctccc
 120
 catctagaaa tatactccgt gatctttctt gatggccaga ctgtgtaaaa ttcatacagt
 180
 gtttactaca gggatcccca aatattgtta gttgaatgaa caaacacaca tttcaaggag
 240
 ggcactacag tgagtagatg aacagttttc tgataggaga ttgtacaagt aatgttttca
 300
 ccagtgtatt ttaggacagc agattcagat taatgcgctg ggactgaatg caaatagtaa
 360
 aattacaaat ataaagtaaa aatttggaaac ctttgccaca gagaggaata ataaattgat
 420
 ttaataattt gaaagaactg taagggttag gtttgttct tttttttagt gcgactgaga
 480
 ttggagtctg tttgtagaca tatctgaaaa aagtgaaggg ggagatggaa gatggtaa
 540
 gccaaaggaaa agatggaagg ataaatcagt gtaataaaaa ggagcacttc ttttcgcca
 600
 acagaagtaa aggtaaagggt taagtgtctg agttaacgaa tggattgttg acctctggg
 660

aggggtgctcc catcagetca gctttgtgac gacctaagaa tatcccttcc acacctttcc
 720
 tgatccaatc gttctggctg cataaaacca cctaaatcaa tcaactgtta cacttccctt
 780
 agtgctagga catattcata taactccac gtattaaatg aaaatacatc catctaaaaa
 840
 taaaacaaca agattgctgc tacaccaaga aaggatttta aaaaggcctg ttcacaagct
 900
 aagtgagggc cagaggaaag gtgttcgttt aaactgaaat tcgagctgcg ataacacctc
 960
 ctaatgcaat caaacgctgt tgcagcacac ttcttaggag atcgggttca acggcagggg
 1020
 ttgggtaagg tgagaatctg gcttggcggc tccggccccg gccatctggt tcccttgggc
 1080
 tccggcggcc accatccact cgacggtctt cgccccgaac gcttggctgc accgcctgcc
 1140
 gaggtcctag atgaatcgtt tcaggcctgg aaacgaggaa gccgtctccg gagaccatcg
 1200
 ccaacgctga cgcccgcggt ctgaggctgc catgggaaga gcggtaggcc accctgctcc
 1260
 tctgatcacc ggaggacagg gacacattgt tcagggccat attcaaacac tgcccgcagt
 1320
 acttgcgtta cgtccctttg tgaaggcagg ccttcgcgg ctccccagat cagtccagcc
 1380
 tgtgtcggac ccgatgacta agcacacagg aaccataac tgagctgcgg aagagccaga
 1440
 agccgcc
 1447

<210> 6102
 <211> 123
 <212> PRT
 <213> Homo sapiens

<400> 6102
 Met Ala Leu Asn Asn Val Ser Leu Ser Ser Gly Asp Gln Arg Ser Arg
 1 5 10 15
 Val Ala Tyr Arg Ser Ser His Gly Asp Leu Arg Pro Arg Ala Ser Ala
 20 25 30
 Leu Ala Met Val Ser Gly Asp Gly Phe Leu Val Ser Arg Pro Glu Ala
 35 40 45
 Ile His Leu Gly Pro Arg Gln Ala Val Arg Pro Ser Val Arg Ala Glu
 50 55 60
 Ser Arg Arg Val Asp Gly Gly Gly Arg Ser Pro Arg Glu Pro Asp Gly
 65 70 75 80
 Arg Gly Arg Ser Arg Gln Ala Arg Phe Ser Pro Tyr Pro Ile Pro Ala
 85 90 95
 Val Glu Pro Asp Leu Leu Arg Ser Val Leu Gln Gln Arg Leu Ile Ala
 100 105 110
 Leu Gly Gly Val Ile Ala Ala Arg Ile Ser Val
 115 120

<210> 6103
 <211> 309

<212> DNA
<213> Homo sapiens

<400> 6103
agatcttctt tttgagttct aggttctctg gaacacactc ctgaatgtgc acagcgccct
60
ctactgcttc ggccaggttg ccacagccac tgatgagaga cagctccagc cacaatggac
120
agaacctatg ccttgatgaa gaagattggg cagtccccag tgagagtcct gaaggagatt
180
gacggcttcg tctgaaccg cctgcagtac gccgtcatca gtgaggcctg gagactggtg
240
gaggaagaaa tagtatctcc tagcgaccta gacctgggtca tgtcagacgg gctgggcatg
300
cggtacgcg
309

<210> 6104
<211> 71
<212> PRT
<213> Homo sapiens

<400> 6104
Glu Thr Ala Pro Ala Thr Met Asp Arg Thr Tyr Ala Leu Met Lys Lys
1 5 10 15
Ile Gly Gln Ser Pro Val Arg Val Leu Lys Glu Ile Asp Gly Phe Val
20 25 30
Leu Asn Arg Leu Gln Tyr Ala Val Ile Ser Glu Ala Trp Arg Leu Val
35 40 45
Glu Glu Glu Ile Val Ser Pro Ser Asp Leu Asp Leu Val Met Ser Asp
50 55 60
Gly Leu Gly Met Arg Tyr Ala
65 70

<210> 6105
<211> 1846
<212> DNA
<213> Homo sapiens

<400> 6105
ncaccagcag cagcaggcag ccttactcca cggggagggc gcctcacagc agccgcggca
60
cagggggccag aaccggggat gcccccaac cctatgaact caacacagcc atcaactgca
120
gggatgaagt ggtgtctccc cttccatctg ctctgcaggg gtccctcagg ctccctatca
180
gcccctccag ctgcctcagt tatctctgca ccccatctt cctcctcccg acatcgcaaa
240
cgtcgcagga cttccagcaa gtcggaggca ggggctaggg gtggaggcca gggttccaag
300
gaaaagggcc gagggagtgt gggaggccgc caccaccacc accaccact gcctgcagca
360
ggcttcaaaa agcaacagcg caagttccag tatgggaatt attgcaaata ctatgggtac
420

cgcaatcctt cctgtgagga tgggcgcctt cgggtgttga agcctgagtg gtttcggggc
480
cgggacgtcc tagatctggg ctgcaatgtg ggccatctga ccctgagcat tgccctgcaag
540
tggggcccggt cccgcatggt gggcctggat atcgattccc ggctcatcca ttctgcccgc
600
caaaacatcc gacactacct ttccgaggag ctgctgtctcc caccacagac tttggaaggg
660
gaccgcggggg cagaggggtga ggaagggacc accaccgttc gaaagaggag ctgcttccca
720
gcctcgctga ctgccagccg gggccccatc gctgcccccc aagtgcctt ggatggagcg
780
gacacatcag tcttcccaa caatgttgc ttctgcacgg gtaattatgt gctggatcga
840
gatgacctgg tggaggccca aacacctgag tatgatgtgg tgctctgect cagctcacc
900
aagtgggtgc atctgaactg gggagacgag ggctgaagc gcatgtttcg ccgatctac
960
cggcacctac gccctggggg catcctggtc ctagagcccc aacctggtc gtcgtatggc
1020
aagagaaaga ctcttacaga aacgatctac aagaactact accgaatcca attgaagcca
1080
gagcagttca gttcctacct gacatcccca gacgtgggct tctccagcta tgagcttgtg
1140
gccacacccc acaacacctc taaaggcttc cagcgtcctg tgtacctgtt ccacaaggcc
1200
cgatccccc gccactaagt gggcccctaa acagaaagtg tgaagaggct gccctcgctg
1260
ctcataagga cctgggggaa gaggaaagtg tcccaaggct tttcctttct gactccaaaa
1320
atagtttctt ttcttgatc tgcaaagaaa gcttttcttc cgtcgtctgc tcagctctct
1380
ccctatgctt ctggcacctg cgcagcaagg ctggctgtgc tggagtcacc atcatcttcc
1440
tctccccag cctcccaggc tggatggcat ggactgtttg ctgacctctg ttctcttagg
1500
gcatgggagg tgggaggata tcaaattctc tagcccttcc ctctattct ctagcccttc
1560
tattctccca aggagagaga ttccatttc tctcggcca ttgtacctag ctcttgcccc
1620
tagctgcatt tcagtggacc atggatagag ggactgaggg ttagacgggg aagactggca
1680
gggaggcacg caggtactgt gaaaatcctt ccttttgccc tccccagtg ggagaggggg
1740
ttgggttttc aatgtgagaa cagcacaata aacttgatgt ctagggcagt ggcccccaa
1800
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
1846

<210> 6106

<211> 405

<212> PRT

<213> Homo sapiens

<400> 6106

```

Xaa Pro Ala Ala Gly Ser Leu Thr Pro Arg Gly Gly Arg Leu Thr
 1           5           10           15
Ala Ala Ala Ala Gln Gly Pro Glu Pro Gly Met Pro Pro Asn Pro Met
          20           25           30
Asn Ser Thr Gln Pro Ser Thr Ala Gly Met Lys Trp Cys Leu Pro Phe
      35           40           45
His Leu Leu Cys Arg Gly Pro Ser Gly Ser Leu Ser Ala Pro Pro Ala
      50           55           60
Ala Ser Val Ile Ser Ala Pro Pro Ser Ser Ser Ser Arg His Arg Lys
      65           70           75           80
Arg Arg Arg Thr Ser Ser Lys Ser Glu Ala Gly Ala Arg Gly Gly Gly
          85           90           95
Gln Gly Ser Lys Glu Lys Gly Arg Gly Ser Trp Gly Gly Arg His His
          100           105           110
His His His Pro Leu Pro Ala Ala Gly Phe Lys Lys Gln Gln Arg Lys
          115           120           125
Phe Gln Tyr Gly Asn Tyr Cys Lys Tyr Tyr Gly Tyr Arg Asn Pro Ser
          130           135           140
Cys Glu Asp Gly Arg Leu Arg Val Leu Lys Pro Glu Trp Phe Arg Gly
      145           150           155           160
Arg Asp Val Leu Asp Leu Gly Cys Asn Val Gly His Leu Thr Leu Ser
          165           170           175
Ile Ala Cys Lys Trp Gly Pro Ser Arg Met Val Gly Leu Asp Ile Asp
          180           185           190
Ser Arg Leu Ile His Ser Ala Arg Gln Asn Ile Arg His Tyr Leu Ser
          195           200           205
Glu Glu Leu Arg Leu Pro Pro Gln Thr Leu Glu Gly Asp Pro Gly Ala
          210           215           220
Glu Gly Glu Glu Gly Thr Thr Thr Val Arg Lys Arg Ser Cys Phe Pro
      225           230           235           240
Ala Ser Leu Thr Ala Ser Arg Gly Pro Ile Ala Ala Pro Gln Val Pro
          245           250           255
Leu Asp Gly Ala Asp Thr Ser Val Phe Pro Asn Asn Val Val Phe Val
          260           265           270
Thr Gly Asn Tyr Val Leu Asp Arg Asp Asp Leu Val Glu Ala Gln Thr
          275           280           285
Pro Glu Tyr Asp Val Val Leu Cys Leu Ser Leu Thr Lys Trp Val His
          290           295           300
Leu Asn Trp Gly Asp Glu Gly Leu Lys Arg Met Phe Arg Arg Ile Tyr
      305           310           315           320
Arg His Leu Arg Pro Gly Gly Ile Leu Val Leu Glu Pro Gln Pro Trp
          325           330           335
Ser Ser Tyr Gly Lys Arg Lys Thr Leu Thr Glu Thr Ile Tyr Lys Asn
          340           345           350
Tyr Tyr Arg Ile Gln Leu Lys Pro Glu Gln Phe Ser Ser Tyr Leu Thr
          355           360           365
Ser Pro Asp Val Gly Phe Ser Ser Tyr Glu Leu Val Ala Thr Pro His
          370           375           380
Asn Thr Ser Lys Gly Phe Gln Arg Pro Val Tyr Leu Phe His Lys Ala
      385           390           395           400
Arg Ser Pro Ser His
          405

```

<210> 6107
 <211> 896
 <212> DNA
 <213> Homo sapiens

<400> 6107
 nnaaatttga cccgcacagt gatgaggcca gggctgggag ggaggcaggg tctatcctca
 60
 gatctcaggg gggcctctgg actgctgctg cctgcacctg cttgtctttt gggcaggcct
 120
 tggatgtcaa ggagatgctc aaggetgggc tcaacaccac cccagctcc agcctcccca
 180
 gtggagtctc cccgaccttc acccgctctc tcagccttct catcattacc ctctgatgga
 240
 tgggggagtt cagttggctc ggggttgctt tggcctgcca ccagggtggtc cacatgcccc
 300
 aggtggagga cggatgtgtc gcctgctgac acaatagcgc ccaggagctg gttgctaccg
 360
 ctgtctgcta cgtaggtaga gagccaagct aggaccaagg ctagaatcag caccaccaca
 420
 cctgccacca ccatcacctc attaccacca cctcaatga ggtgacatc agtgaccccc
 480
 ttagccgacc ctactcctca ctggccggga caactggtct tatcacggag gctggggcca
 540
 ggcagccctt cggttcgggt gggcccagac ccagtcctca cgcagaggga ataggacat
 600
 ccaaaagcgg aaccttcgcc tcagaaaaag ggtgcgggac ccctcctcac cgtgcggtca
 660
 cggtagcgac agggtagatc acaggctgag ggacagagca aagacccctg aggccggaca
 720
 cctgggggtc tgccgggccc ctccccacga gagttccctg tgtctgtgcc aatcgttttc
 780
 gtctttcttt gccgcagttt cttttcctgt aaatcatggt taatgacatt aaccttctta
 840
 ccatacaggg ttagttgtgg ttgtgataaa taattactac cgttattaag caattg
 896

<210> 6108
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 6108
 Xaa Asn Leu Thr Arg Thr Val Met Arg Pro Gly Leu Gly Gly Arg Gln
 1 5 10 15
 Gly Leu Ser Ser Asp Leu Arg Gly Ala Ser Gly Leu Leu Leu Pro Ala
 20 25 30
 Pro Ala Cys Leu Leu Gly Arg Pro Trp Met Ser Arg Arg Cys Ser Arg
 35 40 45
 Leu Gly Ser Thr Pro Pro Pro Ala Pro Ala Ser Pro Val Glu Ser Pro
 50 55 60
 Arg Pro Ser Pro Ala Ser Ser Ala Phe Ser Ser Leu Pro Ser Asp Gly
 65 70 75 80
 Trp Gly Ser Ser Val Gly Ser Gly Leu Pro Trp Pro Ala Thr Arg Trp

	85						90					95			
Ser	Thr	Cys	Pro	Arg	Trp	Arg	Thr	Asp	Val	Ser	Pro	Ala	Asp	Thr	Ile
			100					105					110		
Ala	Pro	Arg	Ser	Trp	Leu	Leu	Pro	Leu	Ser	Ala	Thr				
			115					120							

<210> 6109

<211> 2087

<212> DNA

<213> Homo sapiens

<400> 6109

```

agggcgggaa cgcgcgaggaga ccatgtagtg agaccctcgc gaggtctgag agtcactgga
60
gctaccagaa gcatcatggg gccctgggga gagccagagc tcctgggtgtg gcgccccgag
120
ggtagcttca gagcctccag tgcctgtggg gctggagggtg aagttggggg ccctgggtgct
180
gctgctggtc tcaccctcct ctgcagcctg gtgcccatct gtgtgctgcg ccggccagga
240
gctaaccatg aaggctcagc ttcccgccag aaagccctga gcctagtaag ctgtttcgcg
300
gggggcgctc ttttggccac ttgtctcctg gacctgctgc ctgactacct ggctgccata
360
gatgaggccc tggcagcctt gcacgtgacg ctccagttcc cactgcaaga gttcatcctg
420
gccatgggct tcttcctggt cctgggtgatg gagcagatca cactggctta caaggagcag
480
tcagggccgt cacctctgga ggaaacaagg gctctgctgg gaacagtga tgggtgggccc
540
cagcattggc atgatgggcc aggggtccca caggcgagtg gagccccagc aacccccctca
600
gccttgctg cctgtgtact ggtgttctcc ctggccctcc actccgtgtt cgaggggctg
660
gcggtagggc tgcagcgaga ccgggctcgg gccatggagc tgtgacctggc tttgctgctc
720
cacaagggca tcctggctgt cagcctgtcc ctgaggctgt tgcagagcca ccttagggca
780
caggtgggtg ctggctgtgg gatcctcttc tcatgcatga cacctctagg catcgggctg
840
ggtgcagctc tggcagagtc ggcaggacct ctgcaccagc tggcccagtc tgtgctagag
900
ggcatggcag ctggcacctt tctctatata acctttctgg aaatcctgcc ccaggagctg
960
gccagttctg agcaaaggat cctcaaggtc attctgctcc tagcaggctt tgccctgctc
1020
actggcctgc tcttcatcca aatctagggg gcttcaagag aggggcaggg gagattgatg
1080
atcaggtgcc cctgttctcc cttccctccc ccagttgtgg ggaataggaa ggaaggggga
1140
agggaaatac tgaggaccaa aaagttctct gggagctaaa gatagagcct ttggggctat
1200
ctgactaatg agaggggaagt gggcagacaa gaggtgggcc ccagtcccaa ggaacaagag
1260

```

atggtcaagt cgctagagac atatcagggg acattaggat tggggaagac acttgactgc
 1320
 tagaatcaga ggttgacac tatacataag gacaggctca catgggaggc tggaggtggg
 1380
 taccagctg ctgtggaacg ggtatggaga ggtcataaac ctagagtcag tgtcctgttg
 1440
 gtccagccc atttcagcac cctgccactt ggagtggacc cctcctactc ttcttagcgc
 1500
 ctaccctcat acctatctcc ctctcccat ctcctagggg actggcgcca aatggtctct
 1560
 ccctgccaat tttggtatct tctctggcct ctccagtcct gcttactcct ctatttttaa
 1620
 agtgccaaac aaatccccctt cctctttctc aaagcacagt aatgtggcac tgagccctac
 1680
 ccagcacctc agtgaagggg gcctgcttgc tctttatttt ggtcccgat cctgggggtg
 1740
 ggcagaaata tttctgggc tggggttagga ggaaggttgt tgcagccatc tactgctgct
 1800
 gtaccctagg aatatgggga catggacatg gtgtcccatg cccagatgat aaactgag
 1860
 ctgccaaaac atttttttaa atacaccga ggagcccaag ggggaagggc aatgcctacc
 1920
 cccagcgta tttttgggga gggagggtg tgcataggga catattcttt agaactctatt
 1980
 ttattaactg acctgttttg ggacctgtta cccaaataaa agatgtttct agacatctgt
 2040
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa
 2087

<210> 6110

<211> 323

<212> PRT

<213> Homo sapiens

<400> 6110

Met	Gly	Pro	Trp	Gly	Glu	Pro	Glu	Leu	Leu	Val	Trp	Arg	Pro	Glu	Gly
1				5				10					15		
Ser	Phe	Arg	Ala	Ser	Ser	Ala	Cys	Gly	Ala	Gly	Gly	Glu	Val	Gly	Gly
			20				25					30			
Pro	Gly	Ala	Ala	Ala	Gly	Leu	Thr	Leu	Leu	Cys	Ser	Leu	Val	Pro	Ile
			35				40					45			
Cys	Val	Leu	Arg	Arg	Pro	Gly	Ala	Asn	His	Glu	Gly	Ser	Ala	Ser	Arg
			50			55				60					
Gln	Lys	Ala	Leu	Ser	Leu	Val	Ser	Cys	Phe	Ala	Gly	Gly	Val	Phe	Leu
65					70				75					80	
Ala	Thr	Cys	Leu	Leu	Asp	Leu	Leu	Pro	Asp	Tyr	Leu	Ala	Ala	Ile	Asp
				85				90						95	
Glu	Ala	Leu	Ala	Ala	Leu	His	Val	Thr	Leu	Gln	Phe	Pro	Leu	Gln	Glu
			100				105					110			
Phe	Ile	Leu	Ala	Met	Gly	Phe	Phe	Leu	Val	Leu	Val	Met	Glu	Gln	Ile
			115				120					125			
Thr	Leu	Ala	Tyr	Lys	Glu	Gln	Ser	Gly	Pro	Ser	Pro	Leu	Glu	Glu	Thr
			130			135					140				
Arg	Ala	Leu	Leu	Gly	Thr	Val	Asn	Gly	Gly	Pro	Gln	His	Trp	His	Asp


```

145          150          155          160
Gly Pro Gly Val Pro Gln Ala Ser Gly Ala Pro Ala Thr Pro Ser Ala
          165          170          175
Leu Arg Ala Cys Val Leu Val Phe Ser Leu Ala Leu His Ser Val Phe
          180          185          190
Glu Gly Leu Ala Val Gly Leu Gln Arg Asp Arg Ala Arg Ala Met Glu
          195          200          205
Leu Cys Leu Ala Leu Leu Leu His Lys Gly Ile Leu Ala Val Ser Leu
          210          215          220
Ser Leu Arg Leu Leu Gln Ser His Leu Arg Ala Gln Val Val Ala Gly
225          230          235          240
Cys Gly Ile Leu Phe Ser Cys Met Thr Pro Leu Gly Ile Gly Leu Gly
          245          250          255
Ala Ala Leu Ala Glu Ser Ala Gly Pro Leu His Gln Leu Ala Gln Ser
          260          265          270
Val Leu Glu Gly Met Ala Ala Gly Thr Phe Leu Tyr Ile Thr Phe Leu
          275          280          285
Glu Ile Leu Pro Gln Glu Leu Ala Ser Ser Glu Gln Arg Ile Leu Lys
          290          295          300
Val Ile Leu Leu Leu Ala Gly Phe Ala Leu Leu Thr Gly Leu Leu Phe
305          310          315          320
Ile Gln Ile

```

```

<210> 6111
<211> 1706
<212> DNA
<213> Homo sapiens

```

```

<400> 6111
nnagatctgc ctgcctctct gcccccaaag tgggtgggatt acaggtgtga gccactgctc
60
ccagccaaga aattctttat atgtagatac tattttcttg tcaagttcag atgttggaag
120
taacttgcca ttgttcatt cttgtctttg ttgtttttca tataatagaa atccccccaa
180
tgttttatat cttttatgtc tttattttgt ttgtttttgt ttttgagatg gagtttccct
240
cttgttgccc aggtctggagt gnagtggcac agtctcggct cactgcaacc tccacttcc
300
gggttcaagc agttctcgtg ccgcagcctc ccaagtagct gggactacag gcatgcgcca
360
ccacgccagg ctaatttttg tatttttagt agagatgggg tttcaccatg ttggccgggc
420
tggtctcaaa ctctgacct caggcgatcc acccacctca gcgtcccaaa gtgctgggat
480
tataggcgtg agccaccgca cctggcctat gagtggctct ttaattagga acaaattctaa
540
tggaaggag agttgactga agttggccca caggattgtg agctgggcag tgccttcag
600
aaggcttgcc accttgggac gccccagttt actggggtgt cttgcggagt gcagaaggct
660
ttctggcagc tgcctgggtt tggccagacc ctgcctcccc tcccgcgggc caaccctag
720

```

tcccccttccgtgtccacttgcattcaggggtggctgctgttctgagaacattagaactg
 780
 ggaagagagatggagtcacatggatttttggtggcattaatttgaacttcgtatccaa
 840
 gttagtcccccttattccactgttggcattgacgtttctaagcagttacctgatgctgctg
 900
 ctgaagagctgtcacaggaaggcgcggtggcgtgcccccttgcattaggtctt
 960
 gtgtttgatgtgttcttgtgaattactttgtcagaacaaatattttacgcgttgggttc
 1020
 aggaattttcttttagctcccctctgggtgtgaaattcaggaaacctcccgttgctagt
 1080
 aatcaccccaatgaggtgtaattgtgacaaagtgcattgaccactaaggggccccctt
 1140
 ggtgaccccaacacattcacagcagtggttaaatggcctgcattttggagatgctggctg
 1200
 gcctttcagtgctcccaggagacacatgacctttccctctcagatgcctgaaggag
 1260
 tgctttgaggcaggtgatgtgtgggagtggtggcgccctcctctggcccgggggccct
 1320
 ctgtggaccttggtccctcgtggacctgggttcgtgtgagcactgcagcctccctg
 1380
 ggcattccctccagcgccagcaccactgcaacatatagacctgagtgctaattgtattttg
 1440
 gcttggtgtgtatgtctcttattgtgtaaaattgtgttcttttgacaatttaagtgatt
 1500
 gttttgtttatgtgaagtttgaataaaaaatgaagaaaaaaaattccaaatgactgtgt
 1560
 gtgggtggagactttatttccaagatgtttactcttccctcccccttccattttgagga
 1620
 gctgtgtcacctctctctcccctcagtgctttgtagtctctcttatgtcaataaaagct
 1680
 acattttctctgaaaaaaaaaaaaaa
 1706

<210> 6112

<211> 110

<212> PRT

<213> Homo sapiens

<400> 6112

Met	Ser	Leu	Phe	Cys	Phe	Val	Leu	Phe	Leu	Arg	Trp	Ser	Phe	Pro	Leu
1				5					10					15	
Val	Ala	Gln	Ala	Gly	Val	Xaa	Trp	His	Ser	Leu	Gly	Ser	Leu	Gln	Pro
		20						25					30		
Pro	Leu	Pro	Gly	Phe	Lys	Gln	Phe	Ser	Cys	Arg	Ser	Leu	Pro	Ser	Ser
		35					40					45			
Trp	Asp	Tyr	Arg	His	Ala	Pro	Pro	Arg	Gln	Ala	Asn	Phe	Cys	Ile	Phe
	50					55				60					
Ser	Arg	Asp	Gly	Val	Ser	Pro	Cys	Trp	Pro	Gly	Trp	Ser	Gln	Thr	Pro
65				70					75				80		
Asp	Leu	Arg	Arg	Ser	Thr	His	Leu	Ser	Val	Pro	Lys	Cys	Trp	Asp	Tyr
			85				90					95			
Arg	Arg	Glu	Pro	Pro	His	Leu	Ala	Tyr	Glu	Trp	Ser	Phe	Asn		

100

105

110

<210> 6113

<211> 1095

<212> DNA

<213> Homo sapiens

<400> 6113

nncggccgcc aagcgatccc tgctccgcgc gacactgcgt gcccgcgcac gcagagaggc
60
ggtgacgcac ttacggcgg cagcgtaagt gcgtgacgct cgtcagtggc ttcagttcac
120
acgtggcgcc agcggaggca ggttgatgtg tttgtgcttc cttctacagc caatatgaaa
180
aggcctagta agtggggctg ggaggcgggc gtggaggggac ccacgtctgg aagttgctgc
240
agccaccacg acgctcttct acggctacgg ctttgtctct gctggtatgg ggggtgggagc
300
atacgcgtag gccttgcccc tatttcctgg tagaacggag agttggaagt ccctacggcg
360
atcatgttaa ccgcgcgggc tcattctgcg gaacgaagcc gggcagaggg tggggaagac
420
taggctagat ttctgtaagg aagcagcgtc tgagccaggt ttgaggccca atattttctt
480
tccgtggcca cgtgcagact ggcccagggt agagctgaga atcgctctcc agactcagtg
540
ttcctctcct gccttatgat tcgtgctgtt tgacacgaag tggttgtcgt tttgtgtctc
600
atagctgtt gtgtatgac ccattctaatt attgtgaggg taagtgcagg gaattttgac
660
tcattctggt atctactgaa tttaattctc tgggatttga aagtagcacg tatgtttgca
720
ttaggcattt cgcattagac ttaacgttag gtttggtagc caataacaca agaaaaggat
780
ataactccat agtgcgttaa ccagaaacta atcatttggg ttaacagatt tgtgatgtgt
840
ttctttgtag agttaagaa agcaagtaaa cgcacgacct gccataagcg gtataaaatc
900
caaaaaaagg ttcgagaaca tcacgaaaa ttaagaaagg aggtataaaa gcggggtcac
960
aagaagccta ggaaagaccc aggagtcca aacagtgtc cctttaagga ggctcttctt
1020
gaggaagctg agctaaggaa acagaggctt gaagaactaa aacagcagca gaaacttgac
1080
aggcagaagg aacta
1095

<210> 6114

<211> 87

<212> PRT

<213> Homo sapiens

<400> 6114

Met Cys Phe Phe Val Glu Leu Lys Lys Ala Ser Lys Arg Met Thr Cys

```

      1             5             10             15
His Lys Arg Tyr Lys Ile Gln Lys Lys Val Arg Glu His His Arg Lys
      20             25             30
Leu Arg Lys Glu Ala Lys Lys Arg Gly His Lys Lys Pro Arg Lys Asp
      35             40             45
Pro Gly Val Pro Asn Ser Ala Pro Phe Lys Glu Ala Leu Leu Glu Glu
      50             55             60
Ala Glu Leu Arg Lys Gln Arg Leu Glu Glu Leu Lys Gln Gln Gln Lys
      65             70             75             80
Leu Asp Arg Gln Lys Glu Leu
      85

```

<210> 6115
 <211> 411
 <212> DNA
 <213> Homo sapiens

```

<400> 6115
gcgcgctgg ccccgccagg gcctaagttc cctgcactcg cttccccgcc tgcgcgcc
60
gccgcgcc gcagccctcc ttctcgtggg cgctggggaa gaaactcgtc ggcggtcta
120
actgtggcgt ccagggcg tggaggagc aacttcgggg gcacgtcctc gtaaatcccg
180
tggaggacac tgacctgta cccaccctc gaggccagaa gtcggttctt ttgggggaac
240
tgaggggcca gagcactcgc cccctgact tgcaaagttg gcgtctttac ttggcctccg
300
ggattctgcg catggcgtgt ctccaggctg ctgatgggca agacagatgt gccaggtcca
360
gaatgaactt gagaagagtt tgtagccatt cctgaatcac cttatactag t
411

```

<210> 6116
 <211> 129
 <212> PRT
 <213> Homo sapiens

```

<400> 6116
Met Ala Thr Asn Ser Ser Gln Val His Ser Gly Pro Gly Thr Ser Val
      1             5             10             15
Leu Pro Ile Ser Ser Leu Glu Thr Arg His Ala Gln Asn Pro Gly Gly
      20             25             30
Gln Val Lys Thr Pro Thr Leu Gln Val Arg Gly Ala Ser Ala Leu Ala
      35             40             45
Pro Gln Phe Pro Gln Arg Asn Arg Leu Leu Ala Ser Arg Val Gly Tyr
      50             55             60
Arg Val Ser Val Leu His Gly Ile Tyr Glu Asp Val Pro Pro Lys Leu
      65             70             75             80
Leu Pro Pro Pro Pro Trp Asp Ala Thr Val Arg Pro Ala Asp Glu Phe
      85             90             95
Leu Pro Gln Arg Pro Arg Glu Gly Gly Leu Arg Ala Ala Ala Ala Ala
      100            105            110
Thr Gly Gly Glu Ala Ser Ala Gly Asn Leu Gly Pro Gly Gly Ala Arg

```

115 120 125

Arg

<210> 6117
 <211> 962
 <212> DNA
 <213> Homo sapiens

<400> 6117
 cttccgcctt ccccaagcca acgtctccgc cgtcggctcc gcggcgccgc catggccgac
 60
 gtggaagacg gagaggaaac ctgcgccctg gcctctcact ccgggagctc aggctccaag
 120
 tcgggaggcg acaagatggt ctccctcaag aagtggaacg cgggtggccat gtggagctgg
 180
 gacgtggagt gcgatacgtg cgccatctgc aggggtccagg tgatggatgc ctgtcttaga
 240
 tgtcaagctg aaaacaaaca agaggactgt gttgtggtct ggggagaatg taatcattcc
 300
 ttccacaact gctgcatgtc cctgtgggtg aaacagaaca atcgtgccc tctctgccag
 360
 caggactggg tgggtccaaag aatcggaaca tgagagtggg tagaaggctt cttagcgcag
 420
 ttgttcagag ccctgggtga tcttgaatc cagtgccta caaaggctag aacactacag
 480
 gggatgaatt cttcaaatag gagccgatgg atctgtggtc ctttgggact catcaaagcc
 540
 ttggttttagc attttgtcag ttttatcttc agaaattctc tgcgattaag aagataattt
 600
 attaaagggtg gtccttccta cctctgtggt gtgtgtcgcg cacacagctt agaagtgcta
 660
 taataaaagga aagagctcca aattgaatca cctttataat ttaccattt ctatacaaca
 720
 ggcagtgga gcagtttcag agaacttttt gcattgctat ggttgatcag ttaaaaaaga
 780
 atgttacagt aacaaataaa gtgcagttta aaaccaact cttactctta atttgttctt
 840
 aatacgtatt tttggcaggg agagggaacg gtccatgaaa tctttatgtg atataaggat
 900
 tttaagtttg ggccagtga cagggtaaat aaaatttaac ttttgagcat aaaaaaaaaa
 960
 aa
 962

<210> 6118
 <211> 113
 <212> PRT
 <213> Homo sapiens

<400> 6118
 Met Ala Asp Val Glu Asp Gly Glu Glu Thr Cys Ala Leu Ala Ser His
 1 5 10 15
 Ser Gly Ser Ser Gly Ser Lys Ser Gly Gly Asp Lys Met Phe Ser Leu

```

      20      25      30
Lys Lys Trp Asn Ala Val Ala Met Trp Ser Trp Asp Val Glu Cys Asp
      35      40      45
Thr Cys Ala Ile Cys Arg Val Gln Val Met Asp Ala Cys Leu Arg Cys
      50      55      60
Gln Ala Glu Asn Lys Gln Glu Asp Cys Val Val Val Trp Gly Glu Cys
      65      70      75      80
Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val Lys Gln Asn
      85      90      95
Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val Gln Arg Ile Gly
      100      105      110
Lys

```

<210> 6119

<211> 375

<212> DNA

<213> Homo sapiens

<400> 6119

```

accggttgac aacctcccta tggggaagct agatacagcc ccatggacat gcccactga
60
ccccacacc ccacacggac tgcacggaaa taccacagta accatctctc agtcacagcg
120
tggccccaca gaactcatgc ctgcttgctt taaaccaccc aatgaaaact ccccatggga
180
aacctgcttg gataatactt tggaccccaa taaatgcttt aatcccacaa gtcctctgtc
240
tctgctcttc tcttgccctt acccactggg tgagcatgtg tgtcccaaac ggccctgcaa
300
gggtgtgctgc cctgttcttt ctgggctctg tcaaggaatc aaactgcttc tgttatgtga
360
tgtgtcatgt tgtgc
375

```

<210> 6120

<211> 118

<212> PRT

<213> Homo sapiens

<400> 6120

```

Met Gly Lys Leu Asp Thr Ala Pro Trp Thr Cys Pro Thr Asp Pro His
1      5      10      15
Thr Pro His Gly Leu His Gly Asn Ile Thr Val Thr Ile Ser Gln Ser
      20      25      30
Gln Arg Gly Pro Thr Glu Leu Met Pro Ala Cys Phe Lys Pro Thr Asn
      35      40      45
Glu Asn Ser Pro Trp Glu Thr Cys Leu Asp Asn Thr Leu Asp Pro Asn
      50      55      60
Lys Cys Phe Asn Pro Thr Ser Pro Leu Ser Leu Pro Leu Ser Cys Pro
      65      70      75      80
Tyr Pro Leu Val Glu His Val Cys Pro Lys Arg Pro Cys Lys Val Cys
      85      90      95
Cys Pro Val Leu Ser Gly Leu Cys Gln Gly Ile Lys Leu Leu Leu Leu

```

100
Cys Asp Val Ser Cys Cys
115

105

110

<210> 6121
<211> 1039
<212> DNA
<213> Homo sapiens

<400> 6121
gacggaacgg cgggtggtggc ccgcggaaccg gacggggcac tatgaacgaa gaggagcagt
60
ttgtaaacat tgatttgaat gatgacaaca ttgcagtggt ttgtaaactg ggaacagaca
120
aagaaacact ctccttctgc cacatttggt ttgagctaaa tattgagggg gtaccaaagt
180
ctgatctctt gcacaccaa tcatgaagg gccataaaga ctgctttgaa aaataccatt
240
taattgcaaa ccagggttgt cctcgatcta agctttcaaa aagtacttat gaagaagtta
300
aaaccatttt gagtaagaag ataaactgga ttgtgcagta tgcacaaaat aaggatctgg
360
attcagattc tgaatgttct aaaaagcccc agcatcatct gttaatttc aggcataagc
420
cagaagaaaa attactccca cagtttgagt cccaagtacc aaaatattct gcaaatgga
480
tagatggaag tgcaggtggc atctctaact gtacacaaag aattttggag cagagggaaa
540
atacagactt tggactttct atgttacaag attcaggtgc cactttatgt cgtaacagt
600
tattgtggcc tcatagtcac aaccaggcac agaaaaaga agagacaatc tctagtccag
660
aggctaattgt ccagaccag catccacatt acagcagaga ggaataagtt tttgaagagt
720
taactacca agtgcaagaa aaagattctt tggcctcaca gctccatgtc cgccacgtg
780
ccatcgaaca gcttctgaag aactgttcta agttaccatg tctgcaagta gggcgaacag
840
gaatgaagtc gcacctacc ataaacaact gacctaaaca gacttacttc gtatgcctg
900
ccctttattg gtctcccaga catgcaaact ttgaagaagt ttgaagaaag ttgtgggccg
960
ttttttatg gtcattaaat ttgccaaaca taaggcagta ttaacatct ttgtcaaata
1020
aagcagatca ttatactct
1039

<210> 6122
<211> 221
<212> PRT
<213> Homo sapiens

<400> 6122
Met Asn Glu Glu Glu Gln Phe Val Asn Ile Asp Leu Asn Asp Asp Asn

```

1           5           10           15
Ile Cys Ser Val Cys Lys Leu Gly Thr Asp Lys Glu Thr Leu Ser Phe
20           25           30
Cys His Ile Cys Phe Glu Leu Asn Ile Glu Gly Val Pro Lys Ser Asp
35           40           45
Leu Leu His Thr Lys Ser Leu Arg Gly His Lys Asp Cys Phe Glu Lys
50           55           60
Tyr His Leu Ile Ala Asn Gln Gly Cys Pro Arg Ser Lys Leu Ser Lys
65           70           75           80
Ser Thr Tyr Glu Glu Val Lys Thr Ile Leu Ser Lys Lys Ile Asn Trp
85           90           95
Ile Val Gln Tyr Ala Gln Asn Lys Asp Leu Asp Ser Asp Ser Glu Cys
100          105          110
Ser Lys Lys Pro Gln His His Leu Phe Asn Phe Arg His Lys Pro Glu
115          120          125
Glu Lys Leu Leu Pro Gln Phe Glu Ser Gln Val Pro Lys Tyr Ser Ala
130          135          140
Lys Trp Ile Asp Gly Ser Ala Gly Gly Ile Ser Asn Cys Thr Gln Arg
145          150          155          160
Ile Leu Glu Gln Arg Glu Asn Thr Asp Phe Gly Leu Ser Met Leu Gln
165          170          175
Asp Ser Gly Ala Thr Leu Cys Arg Asn Ser Val Leu Trp Pro His Ser
180          185          190
His Asn Gln Ala Gln Lys Lys Glu Glu Thr Ile Ser Ser Pro Glu Ala
195          200          205
Asn Val Gln Thr Gln His Pro His Tyr Ser Arg Glu Glu
210          215          220

```

<210> 6123

<211> 900

<212> DNA

<213> Homo sapiens

<400> 6123

```

ntgcatgcct gtataccaca gctactcggg aggctgaggg gggagaatcg cttgaaccca
60
ggaggcggag gttgcggtga gctgagatcg caccattgca ctccagcctg ggcaacaaga
120
gcgaaacaac aagagaaaaa aaaggaagct gccctctgcc caaaaccacac gtcgaggctc
180
ccaaacctgg gacccttagg tcttttctca cttagcgtgc ccaaccttct cctggcagga
240
aacaagcctc caggtctgct tccccgcaaa ggactataca tggcaaatga cttaaagctc
300
ctgagacacc atctccagat tcccatccac ttccccaagg atttcttgtc tgtgatgctt
360
gaaaaaggaa gtttgtctgc catgcgtttc ctcaccgccc tgaacttgga gcatccagag
420
atgctggaga aagcgtcccg ggagctgtgg atgcgcgtct ggtcaagggt gagtgtgggg
480
ctctgggaat cctctgggag gaccttgat gactttctga ccttccccag gcacgttttc
540
agggtcatga tcctgcccc gcccggggga tctactgtcc tccagtcac acccctctcc
600

```


ccgcaccgcc ttctgtctgt cttctcttct tcccagaatg aagacatcac cgagccgcag
 660
 agcatcctgg cggctgcaga gaaggctggt atgtctgcag aacaagccca gggacttctg
 720
 gaaaagatcg caacgccaaa ggtgaagaac cagctcaagg agaccactga ggcagcctgc
 780
 agatacggag cctttgggct gcccatcacc gtggcccatg tggatggcca aaccacatg
 840
 ttatttggt ctgaccggat ggagctgctg gcgcacctgc tgggagagaa gtggatgggc
 900

<210> 6124

<211> 300

<212> PRT

<213> Homo sapiens

<400> 6124

Xaa	His	Ala	Cys	Ile	Pro	Gln	Leu	Leu	Gly	Arg	Leu	Arg	Arg	Glu	Asn
1			5						10					15	
Arg	Leu	Asn	Pro	Gly	Gly	Gly	Gly	Cys	Gly	Glu	Leu	Arg	Ser	His	His
			20					25					30		
Cys	Thr	Pro	Ala	Trp	Ala	Thr	Arg	Ala	Lys	Gln	Gln	Glu	Lys	Lys	Lys
		35					40					45			
Glu	Ala	Ala	Leu	Cys	Pro	Lys	Pro	Thr	Ser	Arg	Ser	Pro	Asn	Leu	Gly
	50					55					60				
Pro	Leu	Gly	Leu	Phe	Ser	Leu	Ser	Val	Pro	Asn	Leu	Leu	Leu	Ala	Gly
65				70					75					80	
Asn	Lys	Pro	Pro	Gly	Leu	Leu	Pro	Arg	Lys	Gly	Leu	Tyr	Met	Ala	Asn
			85					90						95	
Asp	Leu	Lys	Leu	Leu	Arg	His	His	Leu	Gln	Ile	Pro	Ile	His	Phe	Pro
			100					105					110		
Lys	Asp	Phe	Leu	Ser	Val	Met	Leu	Glu	Lys	Gly	Ser	Leu	Ser	Ala	Met
	115						120					125			
Arg	Phe	Leu	Thr	Ala	Val	Asn	Leu	Glu	His	Pro	Glu	Met	Leu	Glu	Lys
	130					135					140				
Ala	Ser	Arg	Glu	Leu	Trp	Met	Arg	Val	Trp	Ser	Arg	Val	Ser	Val	Gly
145				150					155					160	
Leu	Trp	Glu	Ser	Ser	Gly	Arg	Thr	Leu	Asp	Asp	Phe	Leu	Thr	Phe	Pro
			165					170						175	
Arg	His	Val	Phe	Arg	Val	Met	Ile	Leu	Pro	Pro	Pro	Gly	Gly	Ser	Thr
		180					185						190		
Val	Leu	Pro	Val	Thr	Pro	Leu	Ser	Pro	His	Arg	Leu	Pro	Ala	Val	Phe
	195					200						205			
Ser	Ser	Ser	Gln	Asn	Glu	Asp	Ile	Thr	Glu	Pro	Gln	Ser	Ile	Leu	Ala
	210					215					220				
Ala	Ala	Glu	Lys	Ala	Gly	Met	Ser	Ala	Glu	Gln	Ala	Gln	Gly	Leu	Leu
225				230						235				240	
Glu	Lys	Ile	Ala	Thr	Pro	Lys	Val	Lys	Asn	Gln	Leu	Lys	Glu	Thr	Thr
			245					250						255	
Glu	Ala	Ala	Cys	Arg	Tyr	Gly	Ala	Phe	Gly	Leu	Pro	Ile	Thr	Val	Ala
		260					265						270		
His	Val	Asp	Gly	Gln	Thr	His	Met	Leu	Phe	Gly	Ser	Asp	Arg	Met	Glu
	275					280						285			
Leu	Leu	Ala	His	Leu	Leu	Gly	Glu	Lys	Trp	Met	Gly				

290

295

300

<210> 6125

<211> 468

<212> DNA

<213> Homo sapiens

<400> 6125

nctacagtca ctcaggagaa gtcccgcatg gaggttctt acttggtga caagaaaaag
60

atgaaacagg acttagagga tgccagtaac aaggcggagg aggagagggc cgcctggag
120

ggagaattga aggggctgca ggagcaaata gcagaaacca aagcccggct tatcacgcag
180

cagcatgatc gggccaaga gcagagtac catgccttga tgctgctga gctccagaag
240

ctgctgcagg aggagaggac ccagcgccag gacttggagc ttaggttaga agagaccga
300

gaagccttgg caggacgagc atatgcagct gaacagatgg aaggatttga actgcagacc
360

aagcagctga cccgtgaggt ggaggagctg aaaagtgaac tgcaggccat tcgagatgag
420

aagaatcagc cagacccccg gctgcaagaa cttcaggaag aggccgcc
468

<210> 6126

<211> 156

<212> PRT

<213> Homo sapiens

<400> 6126

Xaa Thr Val Thr Gln Glu Lys Ser Arg Met Glu Ala Ser Tyr Leu Ala
1 5 10 15

Asp Lys Lys Lys Met Lys Gln Asp Leu Glu Asp Ala Ser Asn Lys Ala
20 25 30

Glu Glu Glu Arg Ala Arg Leu Glu Gly Glu Leu Lys Gly Leu Gln Glu
35 40 45

Gln Ile Ala Glu Thr Lys Ala Arg Leu Ile Thr Gln Gln His Asp Arg
50 55 60

Ala Gln Glu Gln Ser Asp His Ala Leu Met Leu Arg Glu Leu Gln Lys
65 70 75 80

Leu Leu Gln Glu Glu Arg Thr Gln Arg Gln Asp Leu Glu Leu Arg Leu
85 90 95

Glu Glu Thr Arg Glu Ala Leu Ala Gly Arg Ala Tyr Ala Ala Glu Gln
100 105 110

Met Glu Gly Phe Glu Leu Gln Thr Lys Gln Leu Thr Arg Glu Val Glu
115 120 125

Glu Leu Lys Ser Glu Leu Gln Ala Ile Arg Asp Glu Lys Asn Gln Pro
130 135 140

Asp Pro Arg Leu Gln Glu Leu Gln Glu Glu Ala Ala
145 150 155

<210> 6127

<211> 1900

<212> DNA

<213> Homo sapiens

<400> 6127

gtttcctgga ttacaggcca ggcantggag ataggcagcn ncagcctgac tatcctggta
60
gaatgctggg atgggcacct gacaccccct gaggttgcac ccctggctga cagggcatca
120
cgggcaagag actccaatat ggtgagggcg gcagcagagc tggccctgag ctgcctgcct
180
cacgcccattg cattgaaccc taatgagatc cagcgggccc tgggtcagtg caaggaacag
240
gacaacctga tgttggagaa ggcctgcatg gcagtggag aggcagctaa ggggtggggc
300
gtgtaccttg aagtgttgtt tgaggttgct caccagtggc tctggctata tgagcaaact
360
gcaggtggct catccacagc ccgtgaaggg gctacaagct gtagtgccag tgggatcagg
420
gcaggtgggg aagctggggc gggatatgct gagggtagag gggggccagg gactgagccg
480
gttacagtgg cagcggcagc agtgacagca gcagccacag tgggtcccgt catatcggtg
540
gggtctagtt tatacccggg tccaggactg gggcatggcc actcccctgg cctgcacccc
600
tacactgttc tacagcccca cctgccctgt agccctcagt atctcactca cccagctcac
660
cctgcccacc ccctgcctca catgcccgg cctgcccgtc tccctgtgcc cagctctgca
720
taccacagg gtgtgcatcc tgcattccta ggggtcagt acccttattc agtgactcct
780
ccctcaettg ctgccactgc tgtgtctttc cccgttctt ccctggcacc catcacagta
840
catccctacc acacagagcc agggcttcca ctgcccacca gtgtggcctg tgagttgtgg
900
ggccaggga cagtgagcag tgtccatcca gcattcaagt ttccagccat ccaaggtgcc
960
tcactgcctg ccctgaccac acagcccagc cctctggtga gcggagggtt tccaccgccc
1020
gaggaggaga cacacagtca gccagtcaat cccacagcc tgcaccacct gcattgctgc
1080
taccgtgtcg gaatgctggc actggagatg ctgggtcgcc gggcacacaa cgatcacccc
1140
aacaacttct cccgctcccc cccctacact gatgatgtca aatggttgct ggggctggca
1200
gcaaagctgg gagtgaacta cgtgcaccag ttctgtgtgg gggcagccaa gggggtgctg
1260
agcccgtttg tgctgcagga gatcgtcatg gagacgtgc agcggctgag tcccgtcat
1320
gccacaacc acctgcgtgc cccggccttc caccaactgg tgcagcgtg ccagcaggca
1380
tacatgcagt acatccacca ccgcttgatt cacctgactc ctgcggacta cgacgacttt
1440
gtgaatgca tccggagtgc ccgcagcgcc ttctgctga cggccatggg catgatgcag
1500

ttcaacgaca tcctacagaa cctcaagcgc agcaaacaga ccaaggagct gtggcagcgg
 1560
 gtctcactcg agatggccac cttctccccc tgagtctttc acccttaggg tcctatacag
 1620
 ggaccagcgc ctgtggtat gggggccct cacacagggg gagtgaaact tggtgggaca
 1680
 gatcatctc actcagttcc ctggtagcac agactgacag ctgctcttgg gctatagctt
 1740
 ggggccaaga tgtctcacac cctagaagcc tagggctggg ggagacagcc ctgtctggga
 1800
 gggggcggtg ggtggcctct ggtatttatt tggcatttat aaatatataa actcctttt
 1860
 tactctagtc gacctgggccc tttcccttct ttccaaattt
 1900

<210> 6128

<211> 530

<212> PRT

<213> Homo sapiens

<400> 6128

Val	Ser	Trp	Ile	Thr	Gly	Gln	Ala	Xaa	Glu	Ile	Gly	Ser	Xaa	Ser	Leu
1				5					10					15	
Thr	Ile	Leu	Val	Glu	Cys	Trp	Asp	Gly	His	Leu	Thr	Pro	Pro	Glu	Val
		20						25					30		
Ala	Ser	Leu	Ala	Asp	Arg	Ala	Ser	Arg	Ala	Arg	Asp	Ser	Asn	Met	Val
		35					40					45			
Arg	Ala	Ala	Ala	Glu	Leu	Ala	Leu	Ser	Cys	Leu	Pro	His	Ala	His	Ala
	50				55					60					
Leu	Asn	Pro	Asn	Glu	Ile	Gln	Arg	Ala	Leu	Val	Gln	Cys	Lys	Glu	Gln
65				70						75				80	
Asp	Asn	Leu	Met	Leu	Glu	Lys	Ala	Cys	Met	Ala	Val	Glu	Glu	Ala	Ala
			85						90					95	
Lys	Gly	Gly	Gly	Val	Tyr	Pro	Glu	Val	Leu	Phe	Glu	Val	Ala	His	Gln
			100					105						110	
Trp	Phe	Trp	Leu	Tyr	Glu	Gln	Thr	Ala	Gly	Gly	Ser	Ser	Thr	Ala	Arg
		115				120						125			
Glu	Gly	Ala	Thr	Ser	Cys	Ser	Ala	Ser	Gly	Ile	Arg	Ala	Gly	Gly	Glu
		130				135					140				
Ala	Gly	Arg	Gly	Met	Pro	Glu	Gly	Arg	Gly	Gly	Pro	Gly	Thr	Glu	Pro
145				150						155				160	
Val	Thr	Val	Ala	Ala	Ala	Ala	Val	Thr	Ala	Ala	Ala	Thr	Val	Val	Pro
			165						170					175	
Val	Ile	Ser	Val	Gly	Ser	Ser	Leu	Tyr	Pro	Gly	Pro	Gly	Leu	Gly	His
			180					185					190		
Gly	His	Ser	Pro	Gly	Leu	His	Pro	Tyr	Thr	Ala	Leu	Gln	Pro	His	Leu
		195					200					205			
Pro	Cys	Ser	Pro	Gln	Tyr	Leu	Thr	His	Pro	Ala	His	Pro	Ala	His	Pro
		210				215					220				
Met	Pro	His	Met	Pro	Arg	Pro	Ala	Val	Phe	Pro	Val	Pro	Ser	Ser	Ala
225				230						235				240	
Tyr	Pro	Gln	Gly	Val	His	Pro	Ala	Phe	Leu	Gly	Ala	Gln	Tyr	Pro	Tyr
			245						250					255	
Ser	Val	Thr	Pro	Pro	Ser	Leu	Ala	Ala	Thr	Ala	Val	Ser	Phe	Pro	Val

```

      260      265      270
Pro Ser Met Ala Pro Ile Thr Val His Pro Tyr His Thr Glu Pro Gly
      275      280      285
Leu Pro Leu Pro Thr Ser Val Ala Cys Glu Leu Trp Gly Gln Gly Thr
      290      295      300
Val Ser Ser Val His Pro Ala Ser Thr Phe Pro Ala Ile Gln Gly Ala
305      310      315      320
Ser Leu Pro Ala Leu Thr Thr Gln Pro Ser Pro Leu Val Ser Gly Gly
      325      330      335
Phe Pro Pro Pro Glu Glu Thr His Ser Gln Pro Val Asn Pro His
      340      345      350
Ser Leu His His Leu His Ala Ala Tyr Arg Val Gly Met Leu Ala Leu
      355      360      365
Glu Met Leu Gly Arg Arg Ala His Asn Asp His Pro Asn Asn Phe Ser
      370      375      380
Arg Ser Pro Pro Tyr Thr Asp Asp Val Lys Trp Leu Leu Gly Leu Ala
385      390      395      400
Ala Lys Leu Gly Val Asn Tyr Val His Gln Phe Cys Val Gly Ala Ala
      405      410      415
Lys Gly Val Leu Ser Pro Phe Val Leu Gln Glu Ile Val Met Glu Thr
      420      425      430
Leu Gln Arg Leu Ser Pro Ala His Ala His Asn His Leu Arg Ala Pro
      435      440      445
Ala Phe His Gln Leu Val Gln Arg Cys Gln Gln Ala Tyr Met Gln Tyr
      450      455      460
Ile His His Arg Leu Ile His Leu Thr Pro Ala Asp Tyr Asp Asp Phe
465      470      475      480
Val Asn Ala Ile Arg Ser Ala Arg Ser Ala Phe Cys Leu Thr Pro Met
      485      490      495
Gly Met Met Gln Phe Asn Asp Ile Leu Gln Asn Leu Lys Arg Ser Lys
      500      505      510
Gln Thr Lys Glu Leu Trp Gln Arg Val Ser Leu Glu Met Ala Thr Phe
      515      520      525
Ser Pro
      530

```

<210> 6129
 <211> 2012
 <212> DNA
 <213> Homo sapiens

<400> 6129
 ataggagcag tttcagtacc agcccgagta ggatggaatc aaacacggtg ctggaacatt
 60
 cctaccgcga agtggccccg acccccctcc ccccgctccc gcctcccacg cacggggggg
 120
 gggggggggg gggctgatcg gcgctaccgg attggacaac ttggcatggg gcggggcctc
 180
 tgggaggcgt ggctccggc cggctcctct gctgttgcca agggaaactg ccgcgaggag
 240
 gcggaaggag cagaggaccg gcagccggcg tcgaggcggg gcgcgggaac gacggcgggc
 300
 atggcgccct cggggccccg gtgtcgagc tgggtcttgt gtcccagggt gccatccgcc
 360

acctttttca ctgcgtgct ctcgtgctg gtttccgggc ctgcctggt cctgctgcag
420
cagccccctgg cgcctcggg cctcacgctg aagtcgagg cccttcgcaa ctggcaagtt
480
tacaggctgg taacctacat ctttgtctac gagaatccca tctccctgct ctgcggcgt
540
atcatcatct ggcgttttgc tggcaatttc gagagaaccg tgggcaccgt ccgccactgc
600
ttcttcaccg tgatcttcgc catcttctcc gctatcatct tcctgtcatt cgaggctgtg
660
tcatcactgt caaagctggg ggaagtggag gatgccagag gtttcacccc agtggccttt
720
gccatgctgg gagtcaccac cgtccgttct cggatgaggc gggccctggt gtttggcatg
780
gttgtgccct cagtccgtgt tccgtggctc ctgctgggtg cctcgtggt cttccccag
840
acctctttcc tcagtaatgt ctgcgggctg tccatcgggc tggcctatgg cctcacctac
900
tgctattcca tcgacctc agagcgagtg gcgctgaage tcgatcagac cttecccttc
960
agcctgatga ggaggatata cgtgttcaag tacgtctcag ggtcttcagc cgagaggagg
1020
gcagcccaga gccggaaact gaacccgggtg cctggctcct accccacaca gagctgccac
1080
cctcacctgt cccaagcca ccctgtgtcc cagacgcagc acgccagtgg tcagaagctg
1140
gcctcctggc cctcctgcac ccccgggcac atgcccacct tgccctcgta ccagcctgcc
1200
tccggcctgt gctatgtgca gaaccacttt ggtccaaacc ccacctctc cagtgtctac
1260
ccagcttctg cgggcacctc cctgggcata cagcccccca cgcctgtgaa cagccctggc
1320
acgggtgtatt ctggggcctt gggcacacca ggggctgcag gctccaagga gtctccagg
1380
gtcccatgc cctgagagaa ttcttaggga agtcattctca cttggccttc tgaaggctct
1440
ccctaagagt ctctgacaa aagttactta ttgaacacct ctatgtgcca ggctctgtgt
1500
tgggtacttt gatcaatgcc cctgtttcag tctcatctgt actcacggca gccctgtgga
1560
gtacggtgta ctggcccagc ttacagatgc agaaagcgag acgttctgcc atcagataaa
1620
gtcacgtggc tctttagtaa caggacaag gctcctcgcc aaggaaactcg tggcagaaga
1680
gggcagcagt tggcagtagc tgccgatgtc tgtccccagc tccaccattc ctccctgtgg
1740
ctgtgccgtg ctcggtggtt cagtgtccgt gtgtccatgt gtctgccctt caggagctcg
1800
cagctggtgt gcttggcggt cccaggcctg tgtagtgtct ctccctgct gcgggcgccc
1860
ccaccccgat tctctcccc agaagcggtg ggatggggcc ccatgaactg cagcagcatg
1920
ctgagggtgc catgttgtct gcctttgtat aaagaaacag cctctgacct gcaaaaaaaa
1980

aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
2012

<210> 6130
<211> 364
<212> PRT
<213> Homo sapiens

<400> 6130

```

Met Ala Ala Ser Gly Pro Gly Cys Arg Ser Trp Cys Leu Cys Pro Glu
 1           5           10           15
Val Pro Ser Ala Thr Phe Phe Thr Ala Leu Leu Ser Leu Leu Val Ser
      20           25           30
Gly Pro Arg Leu Phe Leu Leu Gln Gln Pro Leu Ala Pro Ser Gly Leu
      35           40           45
Thr Leu Lys Ser Glu Ala Leu Arg Asn Trp Gln Val Tyr Arg Leu Val
      50           55           60
Thr Tyr Ile Phe Val Tyr Glu Asn Pro Ile Ser Leu Leu Cys Gly Ala
      65           70           75           80
Ile Ile Ile Trp Arg Phe Ala Gly Asn Phe Glu Arg Thr Val Gly Thr
      85           90           95
Val Arg His Cys Phe Phe Thr Val Ile Phe Ala Ile Phe Ser Ala Ile
      100          105          110
Ile Phe Leu Ser Phe Glu Ala Val Ser Ser Leu Ser Lys Leu Gly Glu
      115          120          125
Val Glu Asp Ala Arg Gly Phe Thr Pro Val Ala Phe Ala Met Leu Gly
      130          135          140
Val Thr Thr Val Arg Ser Arg Met Arg Arg Ala Leu Val Phe Gly Met
      145          150          155          160
Val Val Pro Ser Val Leu Val Pro Trp Leu Leu Leu Gly Ala Ser Trp
      165          170          175
Leu Ile Pro Gln Thr Ser Phe Leu Ser Asn Val Cys Gly Leu Ser Ile
      180          185          190
Gly Leu Ala Tyr Gly Leu Thr Tyr Cys Tyr Ser Ile Asp Leu Ser Glu
      195          200          205
Arg Val Ala Leu Lys Leu Asp Gln Thr Phe Pro Phe Ser Leu Met Arg
      210          215          220
Arg Ile Ser Val Phe Lys Tyr Val Ser Gly Ser Ser Ala Glu Arg Arg
      225          230          235          240
Ala Ala Gln Ser Arg Lys Leu Asn Pro Val Pro Gly Ser Tyr Pro Thr
      245          250          255
Gln Ser Cys His Pro His Leu Ser Pro Ser His Pro Val Ser Gln Thr
      260          265          270
Gln His Ala Ser Gly Gln Lys Leu Ala Ser Trp Pro Ser Cys Thr Pro
      275          280          285
Gly His Met Pro Thr Leu Pro Pro Tyr Gln Pro Ala Ser Gly Leu Cys
      290          295          300
Tyr Val Gln Asn His Phe Gly Pro Asn Pro Thr Ser Ser Ser Val Tyr
      305          310          315          320
Pro Ala Ser Ala Gly Thr Ser Leu Gly Ile Gln Pro Pro Thr Pro Val
      325          330          335
Asn Ser Pro Gly Thr Val Tyr Ser Gly Ala Leu Gly Thr Pro Gly Ala
      340          345          350
Ala Gly Ser Lys Glu Ser Ser Arg Val Pro Met Pro

```

355

360

<210> 6131

<211> 3526

<212> DNA

<213> Homo sapiens

<400> 6131

nnnggagcgg cgagtaagat ggaagatgag gaggtcgctg agagctggga agaggcggca
60
gacagcgggg aaatagacag acggttgga aaaaaactga agatcacaca aaaagagagc
120
aggaaatcca aatctctctc caaagtgcc atttgtatc aggacgatag ccttcccgcg
180
gggccccctc cacagatccg catcctcaag aggccacca gcaacgggtg ggtcagcagc
240
cccaactcca ccagcaggcc cacccttcca gtcaagtccc tagcacagcg agaggccgag
300
tacgccgagg ccggaagcg gatcctgggc agcgccagcc ccgaggagga gcaggagaaa
360
cccatectcg acaggtcttc ctctgatctt cttcccttca ggccaaccag gatctcccaa
420
cccgaagaca gcaggcagcc caataatgtg atcagacagc ctttgggtcc tgatgggtca
480
cacggcttca aacagcgag ataatgcag gcaagaaaag atgccgccgt tgctgccgtc
540
accgctcctt gggtcgtccg ccacgggttg cactgccgtg gcagacagct ggacttgagc
600
agagggaacg acctgactta cttgcaactgt gatccccctt gctccgcca ctgtgacctt
660
gaaccccatg cactgtgacc tcccccttc tcccccttc cactgtgatt ggcacatcga
720
caagggtgtt ccaagtcaa tggaaaggga aagggtgggg gttaggggaa ggttgggggg
780
accagcaag gactcagaga gtcagacagt gccacttggc cacttggggg aaagccagt
840
ccagcaataa cagtattatc tgctcattaa tttgggattt caaacacaa atgaaaactc
900
acacccaccc accccaagt gcatgtctcc atcacttaaa aagtaagttc catttgaaaa
960
tatcctttct ttttttttct ttcctatttt tgtttgttta tacaatatc tgatttgcaa
1020
gaaaaagtgc atgggagggg ttttagtggt ttaatgaatt tttaattaag aaagggtagt
1080
ttggtagtct acttaaaaat gtttctggga aattcactag aaacattaac caataggatt
1140
ttggtgagct tagcttctgt attcctactg ccgccagaa aaggggcagg gctctgcagc
1200
cgccaggaca gacgagcacc ccatgcctat acctccctcc ccgagctaag tcccagggca
1260
tctgggctct gcctggagac tgggctagct ctgtaggctc ggagagcctg gggaggggtg
1320
caacccacc tctagtattt tgggagatag ggaaagtga ccgacttccc cttcccatc
1380

5309

ccctcagggg ggttccctac cagccagggc tactacttct agaagaaagc agagtgccag
1440
ggagtggagat tgcattccctg ggcttagaag tgacggagag aagacttggt tagtattttg
1500
ccatcagcac aaggaaaacc aggagagagt ctgcctccag gactctgagc cttctgcctc
1560
gtatgttcag aaggtggata ggtcttccca ctccagcatg gcttgaactc ttaggggtct
1620
gcagtgtctc atctccattg gtggccccag ctccagtaact atacctggta catttcctgt
1680
gtgcaatcag taccttgaag gcagaacatt ctgaataaag ttggaaaaag aacagctttg
1740
ctttgcaaag attgatgaca gactggttcc tcagaggcct aggtaccctg tcaccctttt
1800
ttccagagcg agggcctgga atgaaggcag tttatcctct gtccctggag cctgggggtt
1860
gctttggctc cttgaggtgg aagagactaa gagggcagct gccagagca gctgtgtgta
1920
cctggctcct ctccaggttc ctgacccctt ccattgcact gcgccttacc cctcagccag
1980
ccagacagcc tcctctgctc tgaccagcag atacgtttcg gagtgggttg tgtggttttt
2040
gtgatgaggg cagcacgtgg tggccaaggt gacaagctga gtctcacagg ctccactccct
2100
cgttggttcc ctgtgggaat ggtaggccag gccagtaag ccatgcccc aacagtcctc
2160
tcctccggag gaagggccag ctgccagctg agtcagcagc tagtccatag cacagcctta
2220
taactgtaaa gccaggcatt gccatgagc agagctggaa ccagagcttc agtcagtaag
2280
agggaggatt accttcagga gaaggcaagg aagaaaactg gctgctatct ttatagtctc
2340
actgccctaa ccaagtgtcc acattctaaa tgtgtagtgt ccatccctta tgtaatagtg
2400
gtttcccgcc caaagtgaga ctttcccttt aattggagaa gggatatagag gtatgccagg
2460
tggaacgcc agaagtgtct attgccagc cattgggacc acctgttctt gcccactac
2520
cctctagtgg gaggccaaaag taaaggctgg ctggtgggtg tctgtggatt gaggatgtgg
2580
cagggactgg tcctcccacc tcctctggc caaagatggg ctttgcctgc tgtgtgctg
2640
tcaccacca ccagcagtca tgccctgggc ttcccaaag gagaggtagc aggcaacgtt
2700
tttaaaaaga aagaaaacag gaaactgtat tgtgtcgggg gaggcgggag ggagatgagg
2760
aaacggtttg gatttttgtt gtgggagggg attttttggg ggtagtgtgc tgtaactttc
2820
ctaagtgtt ttttccctt tcttttttaa agtaagttgc aggttttggc ttggaaaacc
2880
ccaggggat ggggggcagg aacctgagc tgctgccct ttatctgcct tcacggtact
2940
gtcccttcc ccagctcct ccctgacccc atgggccagg cctcagacct tccagctaac
3000

cgcttcccat gagccactac tctgatgtca gcctataacc aaaggagctg ggggggtccag
 3060
 gcctgggtgac caacctttct cagcccactc aatcaggggtg ctccccacct gcaggcagga
 3120
 ggcaaacaccc tatctgtctac catcagcccc ttccagagcc catctgcccc gcccgacct
 3180
 gccctgcccc gccataacct gctctgcccc atctgggggt gccctgctca gggatgggct
 3240
 ggcagggctg taccagcct ccctggtaag cagagactca agaaacctct ggggtcctgt
 3300
 tttctggctg tgtgatccca ggggtgcaca tgggcccctt ggggtgtctga acagaagggc
 3360
 atggggagga gggctgcacc cctgcagtct tactctgctg gtgtagcggg cagctgcccc
 3420
 ctcccacccc accctgcacc gcgggtcctt gagtcggcag attaagcatt ttataaattg
 3480
 tattttaaat acatgtttta aacttgtaaa aaaaaaaaaa aaaaaa
 3526

<210> 6132

<211> 167

<212> PRT

<213> Homo sapiens

<400> 6132

Xaa	Gly	Ala	Ala	Ser	Lys	Met	Glu	Asp	Glu	Glu	Val	Ala	Glu	Ser	Trp
1				5					10					15	
Glu	Glu	Ala	Ala	Asp	Ser	Gly	Glu	Ile	Asp	Arg	Arg	Leu	Glu	Lys	Lys
			20					25					30		
Leu	Lys	Ile	Thr	Gln	Lys	Glu	Ser	Arg	Lys	Ser	Lys	Ser	Pro	Pro	Lys
		35					40					45			
Val	Pro	Ile	Val	Ile	Gln	Asp	Asp	Ser	Leu	Pro	Ala	Gly	Pro	Pro	Pro
		50				55					60				
Gln	Ile	Arg	Ile	Leu	Lys	Arg	Pro	Thr	Ser	Asn	Gly	Val	Val	Ser	Ser
65					70					75				80	
Pro	Asn	Ser	Thr	Ser	Arg	Pro	Thr	Leu	Pro	Val	Lys	Ser	Leu	Ala	Gln
			85					90					95		
Arg	Glu	Ala	Glu	Tyr	Ala	Glu	Ala	Arg	Lys	Arg	Ile	Leu	Gly	Ser	Ala
			100					105					110		
Ser	Pro	Glu	Glu	Glu	Gln	Glu	Lys	Pro	Ile	Leu	Asp	Arg	Ser	Ser	Ser
		115					120					125			
Asp	Leu	Leu	Pro	Phe	Arg	Pro	Thr	Arg	Ile	Ser	Gln	Pro	Glu	Asp	Ser
130					135					140					
Arg	Gln	Pro	Asn	Asn	Val	Ile	Arg	Gln	Pro	Leu	Gly	Pro	Asp	Gly	Ser
145				150						155				160	
His	Gly	Phe	Lys	Gln	Arg	Arg									
					165										

<210> 6133

<211> 4156

<212> DNA

<213> Homo sapiens

<400> 6133

nngcggccgc cgcgcggggg cccagccgga gccgcgcgcc tgcgccctgc ctttgccctgc
60
gcggctcaga atcaccatcc gcggcgcggg agacgagccg gccgtcccgg gccgggggac
120
ccgcccgcga tggccaccaa ggctcggtt atgtatgatt ttgctgctga acctggaaat
180
aatgaactga cggttaatga aggagaaatc atcacaatca caaatccgga tgtagggtgga
240
ggatggctgg aaggaagaaa catcaaagga gaacgagggc tggttccac agactacgtt
300
gaaattttac ccagtgtggt aaaagatcaa ttttcttgtg gaaattcagt ggctgaccaa
360
gccttccttg attctctctc agccagcaca gctcaggcca gtctgctggc tgcagcaac
420
aatcaccagg ttggcagtgg caatgacccc tggtcagcct ggagtgcctc caaatctggg
480
aactgggaaa gctcagaagg ctggggggcc cagccagagg gggctggagc ccaaagaaac
540
acaacactc ccaacaactg ggacactgcc ttcgccacc cccaggccta ccaaggacca
600
gcaactggtg atgatgatga ctgggatgaa gactgggatg ggcccaaata ctcttcctac
660
tttaaggatt cagagtcagc tgatgcaggc ggcgctcagc gaggaacag tcgtgctagt
720
tcctcatcca tgaaaattcc ccttaacaaa tttcctggat ttgcgaaacc tggcacggaa
780
cagtatttgt tggccaaaca actagcaaaa ccaaagaga aaattcccat cattgttgga
840
gattatggcc caatgtgggt ttatcctacc tctacttttg actgtgtggt agcagatccc
900
agaaaaggct ccaaaatgta tggctctaaag agctacatcg aatatcagct aacacctact
960
aacactaatc gatctgtaaa ccacaggtat aagcactttg actggttata tgagcgtctc
1020
ctggttaagt ttgggtcagc cattccaatc ccttctcttc cagacaaaca agtcacaggc
1080
cgctttgaag aggaatttat caaatgctc atggagagac ttcaggcctg gatgaccagg
1140
atgtgtcgcc atccagtaat ctcagaaagt gaagttttcc agcagttcct aaatttccga
1200
gatgagaagg aatggaaaac tggaaagagg aaggccgaga gagatgagct ggcgggagtc
1260
atgatatttt ccaccatgga accagaggca cctgacttgg acttagtaga aatagagcag
1320
aagtgcgagg ctgtggggaa gttcaccaag gccatggatg acggcgtgaa ggagctgctg
1380
acggtggggc aggagcactg gaagcgtctc acggggccat tacccaagga atatcagaag
1440
ataggaaaag ccttgcagag tttggccaca gtgttcagtt ccagtggcta tcaaggtgaa
1500
acagatctca atgatgcaat aacagaagca ggaaagactt atgaagaaat tgccagctctc
1560
gtggcagAAC agccaaagaa agatctccat ttctgatgg aatgtaatca cgagtataaa
1620

ggttttcttg gctgcttccc tgacatcatt ggcactcaca agggagcaat agaaaaagtg
1680
aaagaaagtg acaaactagt tgcaacaagt aaaatcaccc tacaagacaa acagaacatg
1740
gtgaagagag tcagcatcat gtcttacgcg ttgcaagctg agatgaatca ctttcacagt
1800
aaccgatct atgattacaa cagtgtcatc cgcctgtacc tggagcagca agtgcaattt
1860
tacgaaacga ttgcagaaaa gctgaggcag gccctcagcc gctttccagt gatgtaggac
1920
agaacggggc ttgaagagaa tgccgcgctg tttctcctga cttggggcaa tgcaattcaa
1980
aacttttttt cccctattat tcagaaaaaa aaggaaacaa aacaaaaag aaagagttgc
2040
aaaaaactgc atttatttta ttagccaccc taaatgcgtc agttatttag ggatggctct
2100
ttgttcattt cgcgatccat tatttaaacc agtggaaatt gtctctattt ttggaaagta
2160
cttaaaagt accagaattt tcaatggaaa atgaggggtt tctccccact gatattttac
2220
atagagtc atttatatg tcttataaat tataagtctt atataattta taagtctccc
2280
acaatcttcc agttcttacc cagtgtcaga taattaatta ctaattactt tcttaaaaac
2340
atgaactatg ccagaataaa aaatatctat gtttgatat ttttataact cttttcagtc
2400
ctctggggct cctgtcattg agggagtcg ttacgccttt cactgccaca gttacagctc
2460
aagtgttac acttcaagag ggaggacgct gggggccctt ggggctgcta gtgccatcgt
2520
ggtgtgtggc aggtggggcca tcccatgtcc ctccaggggg accccacagc ctggcagatg
2580
agcagatacc cctggccacc catgtcctca gcgacatttc tgatgtgctg ctcttatgtg
2640
aggaccagt cttctctctt ttgcacttcc ttcctaactt tgggtaaggc atgttttatg
2700
ccatgaagaa tacattagaa gaattgaggg actttgtaga gaattttgtg gctttggctc
2760
aacgggtgag tggctgtgcg gaggcctgtg ttcgggaggg cctgggagaa ggagggcacc
2820
cagcaccctg gcgtctctgg ccctttctta ttctttggct cctcatccac cgtgatgaga
2880
agcgtgctg tggccacggc aactgtctt gcttgggtgg cgggttcctg gccagttggt
2940
gtcatcagca aagagaaaaa gcacagggtta gctccccatt agatggaaaa gtgtagggac
3000
tgagaagggc tgcagcctca gcagtgtaca gagtccccgg cgctctgagg ttggagagaa
3060
agaacagacc agcgccttc ctgactacat ccgaaacttc acacagggtg tttctgagca
3120
ccagcacttc cagcgttcta cttaacggca taaagcaaaa caggaccttg gcacaccgtc
3180
agctcgaact caacactggc agccaccgtc tcaccctgct ggaggagcgc tcccgtctcc
3240

cacaggtgcc ttaccgcgtt cctcccgcgt gctttcattt ttctgacctt ataattacgg
 3300
 gaaatggaaa gtctggggcca gcatcaataa aatgacacca aaaataagta gatgaaatca
 3360
 aatgaatatg agaacatctt gttcttcaat atcacgggtt tttgttaatg tttcataagt
 3420
 aattctcccc acttgatttt tctctataa aatcccatag aacaatgttt atgctatagc
 3480
 catttaatat atgtacaaat tgtaagaat atgtataaat gttttacacg aatgtaagag
 3540
 catgtagaag ccaacatata aataaattgt ttaaaaaaac tgtacagtaa attctcaaag
 3600
 cactttttca aaacactttt tggactttgt gtgtgatttt tgttgttgtt gttaagtact
 3660
 ttttattcca gctgctgaaa atggtccagg taatgaattc ttccccaat cctatttctt
 3720
 ctgacatgaa ttcacatctt cagtccgta ggtcagtggt gcggtccggg aagcgtatca
 3780
 taaccacctg ggagttgcca agaagcagac agtctcccag tgtctgactc tcggatatct
 3840
 ggatttgact ggtgtgaggc aaagtgaaaa agggatgggg gaaatggaga tggcacgggc
 3900
 tcctcagagc gtggtagccg actgtgagga aaagcagagg gaatgtgaaa gaaaataaga
 3960
 gaatccacgg gatttgatgc ctggaagatt ctccttcaag tggcaacatg gcatatatat
 4020
 ccttctccgg ggagtcacat gcaccatttg gttcttagat acgttgatgt tttgattttt
 4080
 aatgatttgt atcaacctgt aggtaccaca gaagagctgt agtcatacaa tcacataact
 4140
 tttacaaata tagtgg
 4156

<210> 6134

<211> 595

<212> PRT

<213> Homo sapiens

<400> 6134

Met	Ala	Thr	Lys	Ala	Arg	Val	Met	Tyr	Asp	Phe	Ala	Ala	Glu	Pro	Gly
1				5					10					15	
Asn	Asn	Glu	Leu	Thr	Val	Asn	Glu	Gly	Glu	Ile	Ile	Thr	Ile	Thr	Asn
		20						25					30		
Pro	Asp	Val	Gly	Gly	Gly	Trp	Leu	Glu	Gly	Arg	Asn	Ile	Lys	Gly	Glu
		35				40					45				
Arg	Gly	Leu	Val	Pro	Thr	Asp	Tyr	Val	Glu	Ile	Leu	Pro	Ser	Asp	Gly
	50				55				60						
Lys	Asp	Gln	Phe	Ser	Cys	Gly	Asn	Ser	Val	Ala	Asp	Gln	Ala	Phe	Leu
65				70					75					80	
Asp	Ser	Leu	Ser	Ala	Ser	Thr	Ala	Gln	Ala	Ser	Ser	Ser	Ala	Ala	Ser
			85				90						95		
Asn	Asn	His	Gln	Val	Gly	Ser	Gly	Asn	Asp	Pro	Trp	Ser	Ala	Trp	Ser
		100					105					110			
Ala	Ser	Lys	Ser	Gly	Asn	Trp	Glu	Ser	Ser	Glu	Gly	Trp	Gly	Ala	Gln

115	120	125
Pro Glu Gly Ala Gly Ala Gln Arg Asn Thr Asn Thr Pro Asn Asn Trp		
130	135	140
Asp Thr Ala Phe Gly His Pro Gln Ala Tyr Gln Gly Pro Ala Thr Gly		
145	150	155
Asp Asp Asp Asp Trp Asp Glu Asp Trp Asp Gly Pro Lys Ser Ser Ser		
165	170	175
Tyr Phe Lys Asp Ser Glu Ser Ala Asp Ala Gly Gly Ala Gln Arg Gly		
180	185	190
Asn Ser Arg Ala Ser Ser Ser Ser Met Lys Ile Pro Leu Asn Lys Phe		
195	200	205
Pro Gly Phe Ala Lys Pro Gly Thr Glu Gln Tyr Leu Leu Ala Lys Gln		
210	215	220
Leu Ala Lys Pro Lys Glu Lys Ile Pro Ile Ile Val Gly Asp Tyr Gly		
225	230	235
Pro Met Trp Val Tyr Pro Thr Ser Thr Phe Asp Cys Val Val Ala Asp		
245	250	255
Pro Arg Lys Gly Ser Lys Met Tyr Gly Leu Lys Ser Tyr Ile Glu Tyr		
260	265	270
Gln Leu Thr Pro Thr Asn Thr Asn Arg Ser Val Asn His Arg Tyr Lys		
275	280	285
His Phe Asp Trp Leu Tyr Glu Arg Leu Leu Val Lys Phe Gly Ser Ala		
290	295	300
Ile Pro Ile Pro Ser Leu Pro Asp Lys Gln Val Thr Gly Arg Phe Glu		
305	310	315
Glu Glu Phe Ile Lys Met Arg Met Glu Arg Leu Gln Ala Trp Met Thr		
325	330	335
Arg Met Cys Arg His Pro Val Ile Ser Glu Ser Glu Val Phe Gln Gln		
340	345	350
Phe Leu Asn Phe Arg Asp Glu Lys Glu Trp Lys Thr Gly Lys Arg Lys		
355	360	365
Ala Glu Arg Asp Glu Leu Ala Gly Val Met Ile Phe Ser Thr Met Glu		
370	375	380
Pro Glu Ala Pro Asp Leu Asp Leu Val Glu Ile Glu Gln Lys Cys Glu		
385	390	395
Ala Val Gly Lys Phe Thr Lys Ala Met Asp Asp Gly Val Lys Glu Leu		
405	410	415
Leu Thr Val Gly Gln Glu His Trp Lys Arg Cys Thr Gly Pro Leu Pro		
420	425	430
Lys Glu Tyr Gln Lys Ile Gly Lys Ala Leu Gln Ser Leu Ala Thr Val		
435	440	445
Phe Ser Ser Ser Gly Tyr Gln Gly Glu Thr Asp Leu Asn Asp Ala Ile		
450	455	460
Thr Glu Ala Gly Lys Thr Tyr Glu Glu Ile Ala Ser Leu Val Ala Glu		
465	470	475
Gln Pro Lys Lys Asp Leu His Phe Leu Met Glu Cys Asn His Glu Tyr		
485	490	495
Lys Gly Phe Leu Gly Cys Phe Pro Asp Ile Ile Gly Thr His Lys Gly		
500	505	510
Ala Ile Glu Lys Val Lys Glu Ser Asp Lys Leu Val Ala Thr Ser Lys		
515	520	525
Ile Thr Leu Gln Asp Lys Gln Asn Met Val Lys Arg Val Ser Ile Met		
530	535	540
Ser Tyr Ala Leu Gln Ala Glu Met Asn His Phe His Ser Asn Arg Ile		

545 550 555 560
 Tyr Asp Tyr Asn Ser Val Ile Arg Leu Tyr Leu Glu Gln Gln Val Gln
 565 570 575
 Phe Tyr Glu Thr Ile Ala Glu Lys Leu Arg Gln Ala Leu Ser Arg Phe
 580 585 590
 Pro Val Met
 595

<210> 6135
 <211> 526
 <212> DNA
 <213> Homo sapiens

<400> 6135
 tcgacgtccc tccttctgag ccatcagcaa ctaggcgact acaggaaact tactccaaat
 60
 tgctactaga aaagaccttg cttgaagagc catctcatca acatgttacg caggaaacac
 120
 aggccaaacc aggggtatcag ccatctggag aatctgacaa agaaaacaaa gtacaggaac
 180
 gtccccaag tgcgtcttcc agtagtgaca tgtctctctc agaacctcca cagcctcttg
 240
 caagaaaaga cttgatggaa tctacatgga tgcagcctga aagattgagc ccacaagttc
 300
 accattctca accacagcct tttgctggaa cagctggaag tttactctcc catctcttga
 360
 gtttagagca tgtaggaatt ttgcataagg attttgaatc tattttacca accaggaaga
 420
 atcataatat ggcttcaagg ccattaactt ttacacctca accatatgtg acctcaccag
 480
 ctgcttatac agatgccttg gtaaaccta gtgccagcca atataa
 526

<210> 6136
 <211> 105
 <212> PRT
 <213> Homo sapiens

<400> 6136
 Met Ser Leu Ser Glu Pro Pro Gln Pro Leu Ala Arg Lys Asp Leu Met
 1 5 10 15
 Glu Ser Thr Trp Met Gln Pro Glu Arg Leu Ser Pro Gln Val His His
 20 25 30
 Ser Gln Pro Gln Pro Phe Ala Gly Thr Ala Gly Ser Leu Leu Ser His
 35 40 45
 Leu Leu Ser Leu Glu His Val Gly Ile Leu His Lys Asp Phe Glu Ser
 50 55 60
 Ile Leu Pro Thr Arg Lys Asn His Asn Met Ala Ser Arg Pro Leu Thr
 65 70 75 80
 Phe Thr Pro Gln Pro Tyr Val Thr Ser Pro Ala Ala Tyr Thr Asp Ala
 85 90 95
 Leu Val Lys Pro Ser Ala Ser Gln Tyr
 100 105

<210> 6137
<211> 2073
<212> DNA
<213> Homo sapiens

<400> 6137
ngcggcgccc aagcgatccc tgctccgcgc gacactgcgt gcccgcgcac gcagagagggc
60
ggtgacgcac tttaaggcgg cagcgtaagt gcgtgacgct cgtcagtggc ttcagttcac
120
acgtggcgcc agcggaggca ggttgctgtg tttgtgcttc cttctacagc caatatgaaa
180
aggcctaagt taaagaaagc aagtaaagc atgacctgcc ataagcggta taaaatccaa
240
aaaaagggttc gagaacatca tcgaaaatta agaaaggagg ctaaaaagca gggtcacaag
300
aagcctagga aagaccaggg agttccaaac agtgctccct ttaaggaggc tcttcttagg
360
gaagctgagc taaggaaaca gaggcttgaa gaactaaac agcagcagaa acttgacagg
420
cagaagggaac tagaaaagaa aagaaaactt gaaactaatc ctgatattaa gnccatcaaa
480
tgtggaacn ntatggaaaa ggagtttggg ctttgcaaaa ctgagaacaa agccaagtcg
540
ggcaaacaga attcaaagaa gctgtactgc caagaactta aaaaggatgat tgaagcctcc
600
gatgtgtcc tagaggtgtt ggatgccaga gatcctcttg gttgcagatg tctcaggta
660
gaagaggcca ttgtccagag tggacagaaa aagctggtac ttatattaaa taaatcagat
720
ctggtaccaaa aggagaattt ggagagctgg cttaaattatt tgaagaaaga attgccaaca
780
gtggtgttca gagcctcaac aaaaccaaag gataaaggga agataaccaaa gcgtgtgaag
840
gcaaagaaga atgctgctcc attcagaagt gaagtctgct ttgggaaaga gggccttttg
900
aaacttcttg gaggttttca ggaaacttgc agcaaagcca ttcgggttg agtaattggt
960
ttcccaaatg tggggaaaag cagcattatc aatagcttaa aacaagaaca gatgtgtaat
1020
gttgggtgat ccatggggct tacaaggagc atgcaagttg tccccttgga caaacagatc
1080
acaatcatag atagtccgag cttcatcgta tctccactta attcctctc tgcgcttgc
1140
ctgcgaagtc cagcaagtat tgaagtagta aaaccgatgg aggctgccag tgccatcctt
1200
tcccaggctg atgctcgaca ggtagtactg aaatatactg tcccaggcta caggaattct
1260
ctggaatttt ttactgtgct tgctcagaga agaggtatgc accaaaaagg tggaatccca
1320
aatgttgaag gtgctgcca actgctgtgg tctgagtggc caggtgcctc attagcttac
1380
tattgccatc cccctacatc ttggactcct cctccatatt ttaatgagag tattgtggta
1440

gacatgaaaa gcggcttcaa tctggaagaa ctggaaaaga acaatgcaca gagcataaga
 1500
 gccatcaagg gccctcattt ggccaatagc atccttttcc agtcttccgg tctgacaaat
 1560
 ggaataatag aagaaaagga catacatgaa gaattgccaa aacggaaaga aaggaagcag
 1620
 gaggagaggg aggatgacaa agacagtgc caggaaactg ttgatgaaga agttgatgaa
 1680
 aacagctcag gcatgtttgc tgcagaagag acaggggagg cactgtctga ggagactaca
 1740
 gcagggtgaac agtctacaag gtcttttatt ttggataaaa tcattgaaga ggatgatgct
 1800
 tatgacttca gtacagatta tgtgtaacag aacaatggct ttttatgatt ttttttttta
 1860
 acattttaag cagactgcta aactgttctc tgtataagtt atgggatgca tgagctgtgt
 1920
 aaattttgtg aatatgtatt atattaaaac caggcaactt ggaatcccta aattctgtaa
 1980
 aaagacaatt catctcattg tgagtggag tagttatctg gaataaaaaa agaagatacc
 2040
 tattgaaaaa aaaaaaaaaa aaaaaaaaaa aaa
 2073

<210> 6138

<211> 550

<212> PRT

<213> Homo sapiens

<400> 6138

Met	Lys	Arg	Pro	Lys	Leu	Lys	Lys	Ala	Ser	Lys	Arg	Met	Thr	Cys	His
1				5				10						15	
Lys	Arg	Tyr	Lys	Ile	Gln	Lys	Lys	Val	Arg	Glu	His	His	Arg	Lys	Leu
		20						25					30		
Arg	Lys	Glu	Ala	Lys	Lys	Gln	Gly	His	Lys	Lys	Pro	Arg	Lys	Asp	Pro
		35				40						45			
Gly	Val	Pro	Asn	Ser	Ala	Pro	Phe	Lys	Glu	Ala	Leu	Leu	Arg	Glu	Ala
	50					55					60				
Glu	Leu	Arg	Lys	Gln	Arg	Leu	Glu	Glu	Leu	Lys	Gln	Gln	Gln	Lys	Leu
65				70					75					80	
Asp	Arg	Gln	Lys	Glu	Leu	Glu	Lys	Lys	Arg	Lys	Leu	Glu	Thr	Asn	Pro
			85						90					95	
Asp	Ile	Lys	Xaa	Ile	Lys	Cys	Gly	Thr	Xaa	Met	Glu	Lys	Glu	Phe	Gly
			100					105						110	
Leu	Cys	Lys	Thr	Glu	Asn	Lys	Ala	Lys	Ser	Gly	Lys	Gln	Asn	Ser	Lys
		115					120					125			
Lys	Leu	Tyr	Cys	Gln	Glu	Leu	Lys	Lys	Val	Ile	Glu	Ala	Ser	Asp	Val
		130				135					140				
Val	Leu	Glu	Val	Leu	Asp	Ala	Arg	Asp	Pro	Leu	Gly	Cys	Arg	Cys	Pro
145					150					155				160	
Gln	Val	Glu	Glu	Ala	Ile	Val	Gln	Ser	Gly	Gln	Lys	Lys	Leu	Val	Leu
			165						170					175	
Ile	Leu	Asn	Lys	Ser	Asp	Leu	Val	Pro	Lys	Glu	Asn	Leu	Glu	Ser	Trp
			180					185					190		
Leu	Asn	Tyr	Leu	Lys	Lys	Glu	Leu	Pro	Thr	Val	Val	Phe	Arg	Ala	Ser

195	200	205
Thr Lys Pro Lys Asp Lys Gly Lys Ile Thr Lys Arg Val Lys Ala Lys		
210	215	220
Lys Asn Ala Ala Pro Phe Arg Ser Glu Val Cys Phe Gly Lys Glu Gly		
225	230	235
Leu Trp Lys Leu Leu Gly Gly Phe Gln Glu Thr Cys Ser Lys Ala Ile		240
	245	250
Arg Val Gly Val Ile Gly Phe Pro Asn Val Gly Lys Ser Ser Ile Ile		255
260	265	270
Asn Ser Leu Lys Gln Glu Gln Met Cys Asn Val Gly Val Ser Met Gly		
275	280	285
Leu Thr Arg Ser Met Gln Val Val Pro Leu Asp Lys Gln Ile Thr Ile		
290	295	300
Ile Asp Ser Pro Ser Phe Ile Val Ser Pro Leu Asn Ser Ser Ser Ala		
305	310	315
Leu Ala Leu Arg Ser Pro Ala Ser Ile Glu Val Val Lys Pro Met Glu		320
	325	330
Ala Ala Ser Ala Ile Leu Ser Gln Ala Asp Ala Arg Gln Val Val Leu		335
	340	345
Lys Tyr Thr Val Pro Gly Tyr Arg Asn Ser Leu Glu Phe Phe Thr Val		350
355	360	365
Leu Ala Gln Arg Arg Gly Met His Gln Lys Gly Gly Ile Pro Asn Val		
370	375	380
Glu Gly Ala Ala Lys Leu Leu Trp Ser Glu Trp Thr Gly Ala Ser Leu		
385	390	395
Ala Tyr Tyr Cys His Pro Pro Thr Ser Trp Thr Pro Pro Pro Tyr Phe		
	405	410
Asn Glu Ser Ile Val Val Asp Met Lys Ser Gly Phe Asn Leu Glu Glu		415
	420	425
Leu Glu Lys Asn Asn Ala Gln Ser Ile Arg Ala Ile Lys Gly Pro His		430
435	440	445
Leu Ala Asn Ser Ile Leu Phe Gln Ser Ser Gly Leu Thr Asn Gly Ile		
450	455	460
Ile Glu Glu Lys Asp Ile His Glu Glu Leu Pro Lys Arg Lys Glu Arg		
465	470	475
Lys Gln Glu Glu Arg Glu Asp Asp Lys Asp Ser Asp Gln Glu Thr Val		
	485	490
Asp Glu Glu Val Asp Glu Asn Ser Ser Gly Met Phe Ala Ala Glu Glu		495
500	505	510
Thr Gly Glu Ala Leu Ser Glu Glu Thr Thr Ala Gly Glu Gln Ser Thr		
515	520	525
Arg Ser Phe Ile Leu Asp Lys Ile Ile Glu Glu Asp Asp Ala Tyr Asp		
530	535	540
Phe Ser Thr Asp Tyr Val		
545	550	

<210> 6139

<211> 2249

<212> DNA

<213> Homo sapiens

<400> 6139

nncggcgcga ggggcggcg ctgtcgcagc ccgtccgcct cgctcatggt acgggcgcca
60

gcctcaccg cagaaaccac ctcacactga gcggcgccgg ctccagactcc acaggctcgtc
120
acagacgatg atggccaggc cccggaggct aaggacggca gctccttttag cggcagagtt
180
ttccgagtga ccttcttgat gctggtgtt tctctaccg ttccctgtct tggagccatg
240
atgtgctgga aatctcctat agatccacag cctctcagct tcaaagaacc cccgctcttg
300
cttgggtgtt tgcatccaaa tacgaagctg cgacaggcag aaaggctgtt tgaaaatcaa
360
cttgttgga cggagtccat agcacatatt ggggatgtga tgtttactgg gacagcagat
420
ggccgggtcg taaaacttga aaatggtgaa atagagacca ttgcccggtt tnggttcggg
480
cccnnttgca aaacccgaga tgatgagcct gtgtgtggga gacccctggg tatccgtgca
540
gggcccattg ggactctctt tgtggccgat gcatacaagg gactatttga agtaaatccc
600
tggaacgtg aagtgaact gctgctgtcc tccgagacac ccattgaggg gaagaacatg
660
tcctttgtga atgatcttac agtcactcag gatgggagga agatttattt caccgattct
720
agcagcaa at ggcaaagacg agactacctg cttctggtga tggagggcac agatgacggg
780
cgctgctgga agtatgatac tgtgaccagg gaagtaaaag ttttatttga ccagctgcgg
840
ttcccgaatg gagtccagct gtctctgca gaagactttg tcctggtggc agaaacaacc
900
atggccagga tacgaagagt ctacgtttct ggctgatga agggcggggc tgatctgttt
960
gtggagaaca tgccctggatt tccagacaac atccggccca gcagctctgg ggggtactgg
1020
gtgggcatgt cgaccatccg ccctaaccct gggttttcca tgcctgattt ctatctgag
1080
agacctgga ttaaaaggat gatttttaag ggaagctgag ctggttgtga tctgctcttt
1140
agtcaagaga cgggtgatga gtttgtccg cggtagaccc tcgtcctaga actcagcgac
1200
agcgggtgct tccggagaag cctgcatgat cccgatgggc tggtgccac ctacatcagc
1260
gagggtgcag aacacgatgg gcacctgtac ctgggctctt tcagggtccc ctctctctg
1320
agactcagcc tccaggtctg ttagccctcc cagatagctg cccctgccac gcaggccagg
1380
agtcttcaca ctccaggcacc aggcctggtc caggaggagc tgtggacaca gtcgtggttc
1440
aagtgtccac atgcacctgt tagtccctga gaggtggtgg gaatggctgc ttcattcctc
1500
gaggatgccc gggccccacc tgggcttgtc tttctgttta gagggaagtg taacatatct
1560
gccatgagga acataaatc atgtaaagcc attttctctt aaacaaaaca aaactttcta
1620
agtacagtca ttctctagga tttgggaagc tccttgact tggaaacagg ctcagggtggg
1680

tggagcagta aggcactacc cagagagctt gctgctgagg cectgtcctg cggectcaaa
 1740
 gttcttcttt actatatata acgtgcgggc atacctttct tcgttggtgg ggggatggaa
 1800
 gagcagaggg agcatggccc aggggtgttg aggccagcgg tgagagccgt gttagccaag
 1860
 acatggaact gtgttctcaa gggttatgtg gggcgtgggc tctccatagt gtgtatgaaa
 1920
 agcttggtga ctctagcggc tcagagagga ctttgcctgg tttctttctg tgaatatctc
 1980
 cgtgctgacc atgctggaat tggatgattc tgcaattcgg gacctactgc aggggtccgt
 2040
 ttagtaacgt cttgtctgtg atctttgttc ttgacctcta gacccaaga tgtgaacagt
 2100
 gcacgtgtta atgtcatctt tgctcatgtg ttataagccc caagttgctg tatattttca
 2160
 caagtatgtc tacacactgg tcatgatttt gataataaat aacgataaat cgacttctgc
 2220
 tgattaacct ttaaaaaaaaa aaaaaaaaaa
 2249

<210> 6140

<211> 381

<212> PRT

<213> Homo sapiens

<400> 6140

Met	Leu	Ala	Val	Ser	Leu	Thr	Val	Pro	Leu	Leu	Gly	Ala	Met	Met	Leu
1				5					10					15	
Leu	Glu	Ser	Pro	Ile	Asp	Pro	Gln	Pro	Leu	Ser	Phe	Lys	Glu	Pro	Pro
			20					25					30		
Leu	Leu	Leu	Gly	Val	Leu	His	Pro	Asn	Thr	Lys	Leu	Arg	Gln	Ala	Glu
		35					40					45			
Arg	Leu	Phe	Glu	Asn	Gln	Leu	Val	Gly	Pro	Glu	Ser	Ile	Ala	His	Ile
		50				55					60				
Gly	Asp	Val	Met	Phe	Thr	Gly	Thr	Ala	Asp	Gly	Arg	Val	Val	Lys	Leu
65					70					75				80	
Glu	Asn	Gly	Glu	Ile	Glu	Thr	Ile	Ala	Arg	Phe	Xaa	Phe	Gly	Pro	Xaa
				85					90					95	
Cys	Lys	Thr	Arg	Asp	Asp	Glu	Pro	Val	Cys	Gly	Arg	Pro	Leu	Gly	Ile
			100					105					110		
Arg	Ala	Gly	Pro	Asn	Gly	Thr	Leu	Phe	Val	Ala	Asp	Ala	Tyr	Lys	Gly
		115				120					125				
Leu	Phe	Glu	Val	Asn	Pro	Trp	Lys	Arg	Glu	Val	Lys	Leu	Leu	Leu	Ser
		130				135					140				
Ser	Glu	Thr	Pro	Ile	Glu	Gly	Lys	Asn	Met	Ser	Phe	Val	Asn	Asp	Leu
145					150					155				160	
Thr	Val	Thr	Gln	Asp	Gly	Arg	Lys	Ile	Tyr	Phe	Thr	Asp	Ser	Ser	Ser
			165					170						175	
Lys	Trp	Gln	Arg	Arg	Asp	Tyr	Leu	Leu	Leu	Val	Met	Glu	Gly	Thr	Asp
		180					185						190		
Asp	Gly	Arg	Leu	Leu	Glu	Tyr	Asp	Thr	Val	Thr	Arg	Glu	Val	Lys	Val
		195				200					205				
Leu	Leu	Asp	Gln	Leu	Arg	Phe	Pro	Asn	Gly	Val	Gln	Leu	Ser	Pro	Ala

210		215		220
Glu Asp Phe Val Leu Val Ala Glu Thr Thr Met Ala Arg Ile Arg Arg				
225		230		235
Val Tyr Val Ser Gly Leu Met Lys Gly Gly Ala Asp Leu Phe Val Glu				
	245		250	255
Asn Met Pro Gly Phe Pro Asp Asn Ile Arg Pro Ser Ser Ser Gly Gly				
	260		265	270
Tyr Trp Val Gly Met Ser Thr Ile Arg Pro Asn Pro Gly Phe Ser Met				
	275		280	285
Leu Asp Phe Leu Ser Glu Arg Pro Trp Ile Lys Arg Met Ile Phe Lys				
	290		295	300
Gly Ser Cys Ala Gly Cys Asp Leu Leu Phe Ser Gln Glu Thr Val Met				
305		310		315
Lys Phe Val Pro Arg Tyr Ser Leu Val Leu Glu Leu Ser Asp Ser Gly				
	325		330	335
Ala Phe Arg Arg Ser Leu His Asp Pro Asp Gly Leu Val Ala Thr Tyr				
	340		345	350
Ile Ser Glu Val His Glu His Asp Gly His Leu Tyr Leu Gly Ser Phe				
	355		360	365
Arg Ser Pro Phe Leu Cys Arg Leu Ser Leu Gln Ala Val				
370		375		380

<210> 6141
 <211> 5651
 <212> DNA
 <213> Homo sapiens

<400> 6141
 cttcgccacc tctctagcct gggcaactgg gggcgccccg gacgaccatg agagataagg
 60
 actgaggggc aggaagggga agcgagcccc ccgagagggtg gcggggactg ctcacgccaa
 120
 gggccacagc ggccgcgctc cggcctcgct ccgcccgtcc acgcctcgcg ggatccgcgg
 180
 gggcagcccc gccggggcgg gatgccgggg ctggggcgga gggcgagtg gctgtgctgg
 240
 tggtagggggc tgcgtgagc ctgctgagg ccccccgcgc tgcggccgct cttgcccgt
 300
 gccgaggccg ccgcccgcgg ggggcagctg ctgggggagc gcgggagccc cggccgcacg
 360
 gagcagccgc gcgcgtcgcc gcagtcctcc tcgggcttcc tgtaccggcg gctcaagacg
 420
 caggagaagc gggagatgca gaaggagatc ttgtcgggtg tggggctccc gcaccggccc
 480
 cggccccctg acggcctcca acagccgcag cccccggcgc tccggcagca ggaggagcag
 540
 cagcagcagc agcagctgcc tcgaggagag cccccctccc ggcgactgaa gtccgcgccc
 600
 ctcttcagc tggatctgta caacgcctg tccgcccaga acgacgagga cggggcgctc
 660
 gagggggaga ggcagcagtc ctggccccac gaagcagcca gctcgtccca ggtcgaggc
 720
 ccgcccccg gcgcgcgcga cccgctcaac cgcaagagcc ttctggcccc cggatctggc
 780

agcggcggcg cgtccccact gaccagcgcg caggacagcg ccttcctcaa cgacgcggac
840
atggtcata gctttgtgaa cctgggtggag tacgacaagg agttctcccc tcgtcagcga
900
caccacaaag agttcaagtt caacttatcc cagattcctg aggggtggggg ggtgacggct
960
gcagaattcc gcacttacaa ggactgtgtt atggggagtt ttaaaaacca aacttttctt
1020
atcagcattt atcaagtctt acaggagcat cagcacagag actctgacct gtttttgttg
1080
gacacccgtg tagtatgggc ctcaagaaga ggctggctgg aatttgacat cacggccact
1140
agcaatctgt gggttgtgac tccacagcat aacatggggc ttcagctgag cgtggtgaca
1200
agggatggag tccacgtcca ccccgagcc gcaggcctgg tgggcagaga cggcccttac
1260
gataagcagc cttcatgggt ggctttcttc aaagtgtgtg aggtccactg gcgcaccacc
1320
aggtcagcct ccagccggcg ccgacaacag agtcgtaatc gctctacca gtcccaggac
1380
gtggcgcggg tctccagtgc ttcagattac aacagcagtg aattgaaaac agcctgcagg
1440
aagcatgagc tgtatgtgag tttccaagac ctgggatggc aggactggat cattgcaccc
1500
aagggtatg ctgccaatta ctgtgatgga gaatgtcctt tcccactcaa cgcacacatg
1560
aatgcaacca accacgcgat tgtgcagacc ttgggtcacc ttatgaacc cgagtatgtc
1620
cccaaacctg gctgtgcgcc aactaagcta aatgccatct cggttcttta cttcaatgac
1680
aattccaaaa tcaccttgaa aaaatacaga aatatggttg taagagcttg tggatattgc
1740
taacttgaaa ccagatgctg gggacacaca ttctgccttg gattccttg tcatagctgc
1800
cttaaaaaac atacagaagc acagttggag gtgggacgat gagactttga aactatctca
1860
tgctgatgcc ttactgccc agaaaaattt taacggacct tgctaataat ttgctcactt
1920
ggtaagtaac atgagtagtt gttggtctgt actaagctga gtttggatgt ctgtagcata
1980
aggtctggta actgcagaaa cataaccgtg aagctcttcc taccctctc ccccaaaaac
2040
ccacaaaat tagttttagc tgtagatcaa gctatttggg gtgtttgtta gtaaataggg
2100
aaaataatct caaaggagtt aaatgtattc ttggctaaag gatcagctgg ttcagtactg
2160
tctatcaaag gtagatttta cagagaacag aaatcgggga agtgggggga acgcctctgt
2220
tcagttcatt ccagaagtc cacaggacgc acagcccagg ccacagccag ggctccacgg
2280
ggcgcccttg tctcagtcac tgtgtgtgta tgttcgtgct ggagttttgt tgggtgaaa
2340
atacacttat ttcagccaaa acataccatt tctacacctc aatcctccat ttgctgtact
2400

ctttgctagt accaaaagta gactgattac actgaggtga ggctacaagg ggtgtgtaac
2460
cgtgtaacac gtgaaggcaa tgctcacctc ttctttacca gaacggttct ttgaccagca
2520
cattaaacttc tggactgccg gctctagtac cttttcagta aagtgggtct ctgccttttt
2580
actatacagc ataccacgcc acaggggttag aaccaacgaa gaaaataaaa tgaggggtgcc
2640
cagcttataa gaatggtggt aggggggatga gcatgctggt tatgaacgga aatcatgatt
2700
tccctttag aaagtgaggc tcagattaaa ttttagaata ttttctaat gtctttttca
2760
caatcatgta ctgggaaggc aatttcatac taaactgatt aaataatata ttataaatct
2820
acaactgttt gcacttacag ctttttttgt aaatataaac tataatttat tgtctatttt
2880
atatctgttt tgctgtaaca ttgaaggaaa gaccagactt ttaaaaaaaa agagtgttatt
2940
tagaaagtat catagtgtaa acaacaaat tgtaccactt tgattttctt ggaatacaag
3000
actcgtgatg caaagctgaa gttgtgtgta caagactctt gacagttgtg cttctctagg
3060
aggttgggtt tttttaaaaa aagaattatc tgtgaacct acgtgattaa taaagatttc
3120
ctttaaggca gaggtgggtc gagatgctgc tgttatcttc tgcctcagac agacagtata
3180
agtggctctt tttctaagat tctaccacc agttactttg ggccaagtat ccacatcccc
3240
ttgcgtatgg gaggtgggtg aagagtgtt gatgcaaagt gggtattatg ggaagtagct
3300
cgatggtaaa aggacaaaca cctatctatc ttagagctta agcctgtatg tgcttatctc
3360
caaggagat agaggtgttt aatcacaagg acagcatgag ttagaggaca ctggcatcaa
3420
cagctgccac agccgtgcac accagggcca gagcagccca ctgacatctg tctttggctc
3480
tgagatcaaa tgcaccccat tcttcataca ttagaaggtc gacctccttg aagcagacca
3540
agtatagcaa gcctctaaaa ggactactga gaaacagaat cagaaactct agaactctag
3600
ttagggccct tcagcagggc tgcagagcct cctgggatac ccaggcctgg gaaagcctgt
3660
ctggtcttgt cccccaggc gacaaatata actggaatct ttcaatgagt taatgagata
3720
ctgagaatga gcctctgga attttccatg cctacccttt ctaaggaaga catccaacag
3780
ttcatgtggg ctctggcttc gtgttaacat gaggaactaa agacatgttt cccccgtga
3840
gaaacagaag gatccctga acagtaactg atttgacaag tatcgacaca taaagttatg
3900
gcatcagcat tetcttactc aggcacggtc agaagtaacg ctgctttcat caggctaac
3960
ctctcacact gagagaagta ttcacagcaa cagaagctcc agcagcggcc gtgaaggtat
4020

cttccagagg tgtgggtttt tgcatttcaa tetgtccat gctacggacc aacacagtat
4080
tgagtcaact gtgaccttaa gatcagagga acgtcaatac tgccacaagg ccacctttcc
4140
agaactcgtg ggcaggtaaa ctatgctttg gatgtgcttt ctttcaccaa aatcactcaa
4200
ctcaggagcc acaaatagtc cagcaatttc atttccctca acgctatttt agtctcaaag
4260
gaaaccatgt aaatttcctc aagagaaggc caaaggggat atatcgccac tgaaaatgtt
4320
tacacagtga ccatgagtta cacatttact tagagaaact taacttaata aagaatctgt
4380
agagtgtgtt ggcttggaac acacacacac aaagaagata cctcacgctt agtatgttct
4440
gctttctgaa cagccaccac tgggaaccca gtggcctctg tgggactgaa ctctaaacg
4500
caggggtcgg gagctgggca ggagaggtga cctccaactg tggtcctaaa gttcgtcttt
4560
cgcttggttc aggacaaagc ggtgtaacga gtcaaggctc ctgcctccac tgtgtcact
4620
gactttcttc cctcctcgga aaagcaataa cgtggggtag cctcgtaccg aatactgtct
4680
gcagatattc cgttcagcag tgcagtctac ttcggcgatc ttgacccccg ccagaccagg
4740
gaattccttt ttagagagtt cctcccaagt aggagccaga gtcttacaat gaccacacca
4800
tggagcataa aacttgatga aggttatctc ttctgcaatg gtgtcatcga agttattttc
4860
agtgagtgcc aacacagtgc cctgtgcagc ctggggtcga gctgccagca cgggggcctc
4920
tgagggcgtg acggctctcg tcgtccagc ctctgtgcgc tgcagctgcg actccacgta
4980
ctccctcagt gactccaaat cccgctttcc cttgtactga tccacctttt tcccatctcg
5040
gaaccagaga agagtgggat agccacgaac ctgggttccg gagcagagtt catagtgtctg
5100
tgtacaatca accttgccaa tcttgacagt ttcggaatgt tcaaggcca gagccagctg
5160
ctcccagggt ggagccaggg ctttgacgtg accacaccac ggagcgaaga acttgataaa
5220
gtggtcgctt tgtgcaacgt gcagctcaaa gttgcttgcg gagagctcat acagcccttg
5280
cttgagctcg ggggcactgg gcgggtccac ttccggctct ggtgtcactg gtcctcgtt
5340
cagtgtctgc agcatccagt tttccagtgt ctggaagtc cgaggaccct ggtacttcac
5400
agcttcttgg cctggcttga aaagctttaa ggtggggtat cctcgcaccc cctgggcgga
5460
gcacacgtcg gagtgggccc tgcagtccac tttagccaca tagactttgg catcttccat
5520
gctgtgttat ttgtctccca ggtcattcca agtcggctgc agccgctggc agtgtccaca
5580
ccagggcgcg aagaacatga cgaagtgcgc ggcgctctgg atcccgtgcg tgaacatgtc
5640

ggccgtgtac a
5651

<210> 6142
<211> 513
<212> PRT
<213> Homo sapiens

<400> 6142

```

Met Pro Gly Leu Gly Arg Arg Ala Gln Trp Leu Cys Trp Trp Trp Gly
 1           5           10           15
Leu Leu Cys Ser Cys Cys Gly Pro Pro Pro Leu Arg Pro Pro Leu Pro
 20           25           30
Ala Ala Ala Ala Ala Ala Gly Gly Gln Leu Leu Gly Asp Gly Gly
 35           40           45
Ser Pro Gly Arg Thr Glu Gln Pro Pro Pro Ser Pro Gln Ser Ser Ser
 50           55           60
Gly Phe Leu Tyr Arg Arg Leu Lys Thr Gln Glu Lys Arg Glu Met Gln
 65           70           75           80
Lys Glu Ile Leu Ser Val Leu Gly Leu Pro His Arg Pro Arg Pro Leu
 85           90           95
His Gly Leu Gln Gln Pro Gln Pro Pro Ala Leu Arg Gln Gln Glu Glu
 100          105          110
Gln Gln Gln Gln Gln Gln Leu Pro Arg Gly Glu Pro Pro Pro Gly Arg
 115          120          125
Leu Lys Ser Ala Pro Leu Phe Met Leu Asp Leu Tyr Asn Ala Leu Ser
 130          135          140
Ala Asp Asn Asp Glu Asp Gly Ala Ser Glu Gly Glu Arg Gln Gln Ser
 145          150          155          160
Trp Pro His Glu Ala Ala Ser Ser Ser Gln Arg Arg Gln Pro Pro Pro
 165          170          175
Gly Ala Ala His Pro Leu Asn Arg Lys Ser Leu Leu Ala Pro Gly Ser
 180          185          190
Gly Ser Gly Gly Ala Ser Pro Leu Thr Ser Ala Gln Asp Ser Ala Phe
 195          200          205
Leu Asn Asp Ala Asp Met Val Met Ser Phe Val Asn Leu Val Glu Tyr
 210          215          220
Asp Lys Glu Phe Ser Pro Arg Gln Arg His His Lys Glu Phe Lys Phe
 225          230          235          240
Asn Leu Ser Gln Ile Pro Glu Gly Gly Val Val Thr Ala Ala Glu Phe
 245          250          255
Arg Ile Tyr Lys Asp Cys Val Met Gly Ser Phe Lys Asn Gln Thr Phe
 260          265          270
Leu Ile Ser Ile Tyr Gln Val Leu Gln Glu His Gln His Arg Asp Ser
 275          280          285
Asp Leu Phe Leu Leu Asp Thr Arg Val Val Trp Ala Ser Glu Glu Gly
 290          295          300
Trp Leu Glu Phe Asp Ile Thr Ala Thr Ser Asn Leu Trp Val Val Thr
 305          310          315          320
Pro Gln His Asn Met Gly Leu Gln Leu Ser Val Val Thr Arg Asp Gly
 325          330          335
Val His Val His Pro Arg Ala Ala Gly Leu Val Gly Arg Asp Gly Pro
 340          345          350
Tyr Asp Lys Gln Pro Phe Met Val Ala Phe Phe Lys Val Ser Glu Val

```

355 360 365
 His Val Arg Thr Thr Arg Ser Ala Ser Ser Arg Arg Arg Gln Gln Ser
 370 375 380
 Arg Asn Arg Ser Thr Gln Ser Gln Asp Val Ala Arg Val Ser Ser Ala
 385 390 395 400
 Ser Asp Tyr Asn Ser Ser Glu Leu Lys Thr Ala Cys Arg Lys His Glu
 405 410 415
 Leu Tyr Val Ser Phe Gln Asp Leu Gly Trp Gln Asp Trp Ile Ile Ala
 420 425 430
 Pro Lys Gly Tyr Ala Ala Asn Tyr Cys Asp Gly Glu Cys Ser Phe Pro
 435 440 445
 Leu Asn Ala His Met Asn Ala Thr Asn His Ala Ile Val Gln Thr Leu
 450 455 460
 Val His Leu Met Asn Pro Glu Tyr Val Pro Lys Pro Cys Cys Ala Pro
 465 470 475 480
 Thr Lys Leu Asn Ala Ile Ser Val Leu Tyr Phe Asn Asp Asn Ser Lys
 485 490 495
 Ile Thr Leu Lys Lys Tyr Arg Asn Met Val Val Arg Ala Cys Gly Tyr
 500 505 510
 Cys

<210> 6143
 <211> 1137
 <212> DNA
 <213> Homo sapiens

<400> 6143
 tttttttttt tttttgagct gcagagcact gagctttatt tacaaacttc cacagaatcc
 60
 ctcaccctcc accccagggc cctccctctc tggaactcag gcagcagaca agcttgggtc
 120
 caccacctcg cccaacctag gacagctggg cctgagctgg gcgggcaggg gattccatct
 180
 cctgggtgcg cctgccagag gggagaggct ggaggcggcg ggaatgctgt tctccccag
 240
 ggtcagtc ccagggttc tgccgtggga cgtggggccg agggacctgg ggcactgacc
 300
 aggtcggggt cgggggcagc atctgcattg gtgaggccgg gtgaaaagg ctgctggtgc
 360
 cggacagctt ctggtgctgg gcctagcgga gacagaggac cagagggtcca ggttcctggg
 420
 ggctgagctt ttctcagact tcggaggaaa aatgtcccag cccagcaggc agtgccggg
 480
 cagggccagt gtgtcagagg cgtaaaagct ctttcgggtg gatgtggtac cgtgccccg
 540
 gctccaggat cgacagcggg atgctcacc tgcgcagggg ggctgacctg cgtgctgctg
 600
 ccagggtccc agggccctgc tggctctcgc atgtcctgca caggcggcag ggggtaccg
 660
 gatccacagg caccgggaac aggcgcgggt tgacacggta acagtacacg cattcatggt
 720
 ctctctccac gccgtgcca ctgctctcac gcaggcctgg caactggggt tcaggatggc
 780

tgcagataca ctctctcttg ttggtttccc gaaactcctg cagcttggag aagaaggcct
 840
 caggctggct ggtgatggaa gagctggtgt ccagagaccc tgcaatccag tcatagccca
 900
 ggtatggcct gaggcgccag ctctctcag gaactgcaga ctctcagag aaggtcacc
 960
 tgggcttga cagcttgctc tgttgagcca ggatggacct cggggtctgt gctctctggg
 1020
 gtctgggac acccagcctc cctgagggct ctgggtccct caggtttgag gtgcccagcg
 1080
 aggggtctga gtggggtctc ggtcggccca gggactcctg gtgctggcat ttggcag
 1137

<210> 6144

<211> 141

<212> PRT

<213> Homo sapiens

<400> 6144

Phe	Phe	Phe	Phe	Glu	Leu	Gln	Ser	Thr	Glu	Leu	Tyr	Leu	Gln	Thr
1				5				10					15	
Ser	Thr	Glu	Ser	Leu	Thr	Leu	His	Pro	Arg	Val	Leu	Pro	Leu	Trp
			20					25					30	Asn
Ser	Gly	Ser	Arg	Gln	Ala	Trp	Val	His	Pro	Pro	Ala	Gln	Pro	Arg
			35				40					45		Thr
Ala	Gly	Pro	Glu	Leu	Gly	Gly	Gln	Gly	Ile	Pro	Ser	Pro	Gly	Cys
	50					55				60				Ala
Cys	Gln	Arg	Gly	Glu	Ala	Gly	Gly	Gly	Gly	Asn	Ala	Val	Leu	Pro
65					70					75				80
Glu	Ser	Val	Leu	Arg	Ala	Ser	Ala	Val	Gly	Arg	Gly	Ala	Glu	Gly
			85					90					95	Pro
Gly	Ala	Leu	Thr	Arg	Ser	Gly	Ser	Gly	Ala	Ala	Ser	Ala	Leu	Val
			100					105					110	Arg
Pro	Gly	Glu	Lys	Gly	Cys	Trp	Cys	Arg	Thr	Ala	Ser	Gly	Ala	Gly
			115					120					125	Pro
Ser	Gly	Asp	Arg	Gly	Pro	Glu	Val	Gln	Val	Pro	Gly	Gly		
			130				135						140	

<210> 6145

<211> 766

<212> DNA

<213> Homo sapiens

<400> 6145

nacaagggt cagcctcctc tcttggggtc cagcttgctg cctctggctc acctgttctt
 60
 agagcaatgt cttcccagca gcagcagcgg caggcagcag tgcccacccc agaggcccag
 120
 cagcagcaag tgaagcagcc ttgtcagcca cccctgttta aatgtcaaga gacatgtgca
 180
 cccaaaacca aggatccatg tgctccccag gtcaagaagc aatgccacc gaaagacacc
 240
 atcattccag cccagcagaa gtgtccctca gccagcaag cctccaagag caaacagaag
 300

taaggatgga ctggatatta ccatcatcca ccatcctggc taccagatgg aaccttctct
 360
 tcttcttct cctcttcct ccagctcttg agcctaccct cctctcacat ctcctcctgc
 420
 ccaagatgta aggaagcatt gtaaggattt ctteccatcg tacccttccc cacacatacc
 480
 accttggtt ctctatata ccaccccgat gctctcccag gtgggtgtga gagagacctc
 540
 attctctgca ggtccagcg tggccacagc taaggcccat ccatttccca aagtgaggaa
 600
 agtgtctggg cttcttcttg ggtccacccc tgacaagtag ggtcacagag gctggtgcac
 660
 agtttctgcc tcattcctct ccatgatgcc cctgctctg ggcttctctc ctgttttccc
 720
 caataaatat gtgcctcatg taataaatgt gtctgcttcc tgggct
 766

<210> 6146
 <211> 100
 <212> PRT
 <213> Homo sapiens

<400> 6146
 Xaa Lys Gly Ser Ala Ser Ser Pro Gly Val Gln Leu Val Ala Ser Gly
 1 5 10 15
 Ser Pro Val Pro Arg Ala Met Ser Ser Gln Gln Gln Arg Gln Ala
 20 25 30
 Ala Val Pro Thr Pro Glu Ala Gln Gln Gln Gln Val Lys Gln Pro Cys
 35 40 45
 Gln Pro Pro Pro Val Lys Cys Gln Glu Thr Cys Ala Pro Lys Thr Lys
 50 55 60
 Asp Pro Cys Ala Pro Gln Val Lys Lys Gln Cys Pro Pro Lys Asp Thr
 65 70 75 80
 Ile Ile Pro Ala Gln Gln Lys Cys Pro Ser Ala Gln Gln Ala Ser Lys
 85 90 95
 Ser Lys Gln Lys
 100

<210> 6147
 <211> 1852
 <212> DNA
 <213> Homo sapiens

<400> 6147
 ntgctaactc aaggagctac tgtacttaaa aacatgcaaa atatgttgta tttgtggcat
 60
 agttcatatt tacactatca taaaattatg gccgagaagt taaatattct aaatgtgtca
 120
 acatagttct ctgtaaaact gacttacttt ccaaatatat tttgaaataa aacaatataa
 180
 aaatgttttc tgtttttagg aatggtggaa agcagcagac ataattggag tgggttggat
 240
 aagcaaagtg atattcaaaa tttaaatgaa gagagaatct tagctttaca gctttgtggg
 300

tggataaaga aaggaacgga tgtagacgtg gggccatttt tgaactccct tgtacaagaa
360
ggggaatggg aaagagctgc tgctgtggca ttgttcaact tggatattcg ccgagcaatc
420
caaatcctga atgaaggggc atcttctgaa aaaggagatc tgaatctcaa tgtggtagca
480
atggctttat cgggttatac ggatgagaag aactcccttt ggagagaaat gtgtagcaca
540
ctgcgattac agctaaataa cccgtatttg tgtgtcatgt ttgcatttct gacaagtga
600
acaggatctt acgatggagt tttgtatgaa aacaaagttg cagtacgtga cagagtggca
660
tttgcttgta aattcccttag tgatactcag ttaaatagat acatcgaaaa gttgaccaat
720
gaaatgaaag aggctggaaa tttggaagga attttgctta caggccttac taaagatgga
780
gtggacttaa tggagagtta tgttgataga actggagatg ttcaaacagc aagtactgt
840
atgttacagg gttcaccttt agatgttctt aaagatgaaa gggttcagta ctggattgag
900
aattatagaa atttattaga tgcctggagg ttttggcata aacgagctga atttgatatt
960
cacaggagta agttggatcc cagttccaag cctttagcac aagtttttgt gagttgcaat
1020
ttctgtggca agtcaatctc ctacagctgt tcagctgtgc ctcatcaggg cagaggtttt
1080
agtcaagtat gtgtgagtggt ctcaccaacg aaatctaaag tcacaagttg tectggctgt
1140
cgaaaaccac ttcctcgatg tgcgctttgt ctcatctaata tgggaacacc agtttctagc
1200
tgtcctggag gaaccaaacc agatgaaaaa gtggacttga gcaaggacaa aaaattagcc
1260
caatttaaca actggtttac atggtgtcat aattgcaggc acggtggaca tgctggacat
1320
atgcttagtt gggtcaggga ccatgcagag tgcctgtgt ctgcatgcac gtgtaaatgt
1380
atgcagttgg atacaacggg gaatctggta cctgcagaga ctgtccagcc ataaaatgtt
1440
accaccttaa gagaaccctt caagtgtgga gctttctagt aggtgtcctt catagctcag
1500
aaacatacct cagaacaagc cattcatgac ttacctgtaa tgggaaaata aatcattcta
1560
tcagatcagc agttttgatg tttgagtgat tttgatatgc ttcacagaga caaatgctgc
1620
caaaataaac atcgaagtat agacatgagt tctgttcagc aggttgaaaa gtctgattta
1680
gaaaaaacttt ctaagttttg gttgaaatta tgaacactct agaagcagaa tttctggaag
1740
agccaagaac agactttgag cctatatctt caaagctgaa actggatata tttcaataaa
1800
atatgtgcac ttttaaaata aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
1852

<210> 6148

<211> 410
 <212> PRT
 <213> Homo sapiens

<400> 6148

```

Met Val Glu Ser Ser Arg His Asn Trp Ser Gly Leu Asp Lys Gln Ser
  1           5           10           15
Asp Ile Gln Asn Leu Asn Glu Glu Arg Ile Leu Ala Leu Gln Leu Cys
      20           25           30
Gly Trp Ile Lys Lys Gly Thr Asp Val Asp Val Gly Pro Phe Leu Asn
  35           40           45
Ser Leu Val Gln Glu Gly Glu Trp Glu Arg Ala Ala Ala Val Ala Leu
  50           55           60
Phe Asn Leu Asp Ile Arg Arg Ala Ile Gln Ile Leu Asn Glu Gly Ala
  65           70           75           80
Ser Ser Glu Lys Gly Asp Leu Asn Leu Asn Val Val Ala Met Ala Leu
      85           90           95
Ser Gly Tyr Thr Asp Glu Lys Asn Ser Leu Trp Arg Glu Met Cys Ser
      100           105           110
Thr Leu Arg Leu Gln Leu Asn Asn Pro Tyr Leu Cys Val Met Phe Ala
      115           120           125
Phe Leu Thr Ser Glu Thr Gly Ser Tyr Asp Gly Val Leu Tyr Glu Asn
      130           135           140
Lys Val Ala Val Arg Asp Arg Val Ala Phe Ala Cys Lys Phe Leu Ser
      145           150           155           160
Asp Thr Gln Leu Asn Arg Tyr Ile Glu Lys Leu Thr Asn Glu Met Lys
      165           170           175
Glu Ala Gly Asn Leu Glu Gly Ile Leu Leu Thr Gly Leu Thr Lys Asp
      180           185           190
Gly Val Asp Leu Met Glu Ser Tyr Val Asp Arg Thr Gly Asp Val Gln
      195           200           205
Thr Ala Ser Tyr Cys Met Leu Gln Gly Ser Pro Leu Asp Val Leu Lys
      210           215           220
Asp Glu Arg Val Gln Tyr Trp Ile Glu Asn Tyr Arg Asn Leu Leu Asp
      225           230           235           240
Ala Trp Arg Phe Trp His Lys Arg Ala Glu Phe Asp Ile His Arg Ser
      245           250           255
Lys Leu Asp Pro Ser Ser Lys Pro Leu Ala Gln Val Phe Val Ser Cys
      260           265           270
Asn Phe Cys Gly Lys Ser Ile Ser Tyr Ser Cys Ser Ala Val Pro His
      275           280           285
Gln Gly Arg Gly Phe Ser Gln Tyr Gly Val Ser Gly Ser Pro Thr Lys
      290           295           300
Ser Lys Val Thr Ser Cys Pro Gly Cys Arg Lys Pro Leu Pro Arg Cys
      305           310           315           320
Ala Leu Cys Leu Ile Asn Met Gly Thr Pro Val Ser Ser Cys Pro Gly
      325           330           335
Gly Thr Lys Ser Asp Glu Lys Val Asp Leu Ser Lys Asp Lys Lys Leu
      340           345           350
Ala Gln Phe Asn Asn Trp Phe Thr Trp Cys His Asn Cys Arg His Gly
      355           360           365
Gly His Ala Gly His Met Leu Ser Trp Phe Arg Asp His Ala Glu Cys
      370           375           380
Pro Val Ser Ala Cys Thr Cys Lys Cys Met Gln Leu Asp Thr Thr Gly
  
```

```

385                               390                               395                               400
Asn Leu Val Pro Ala Glu Thr Val Gln Pro
                               405                               410

<210> 6149
<211> 1949
<212> DNA
<213> Homo sapiens

<400> 6149
nggccgcggg ctgcatgggc agcgcccgcg ccccgccgct gagccgtcgc ggagccgcgc
60
agccctcgga gcacgaatat atacagccct gctctgggac acacctccat tggatttaaa
120
agacagtcct cgtcagcact gactttcagc tatggaatcg cagacggttg atgatgaagc
180
gccggccggtg taaatgaaga tcgggtgagg agcaggacga tgcccaaggg tgggtgcctt
240
aaagcaccac agcaggaaga gcttcccttc agcagcgaca tgggtggaga gcagactggg
300
aaaaaggata aagataaagt ttctctaacc aagaccccaa aactggagcg tggcgatggc
360
gggaaggagg tgagggagcg agccagcaag cggaagctgc ccttcaccgc gggcgccaat
420
ggggagcaga aggactcgga cacagagaag cagggccctg agcgggaagag gattaagaag
480
gagcctgtca cccggaaggc cgggctgctg ttggcatgg ggctgtctgg aatccgagcc
540
ggctaccccc tctccgagcg ccagcaggtg gcccttctca tgcagatgac ggccgaggag
600
tctgccaaac gccagtgga cacaacacca aagcaccctt cccagtctac agtgtgtcag
660
aagggaacgc ccaactctgc ctcaaaaacc aaagataaac tgaacaagag aaacgagcgt
720
ggagagaccc gcctgcaccg agccgccatc cgcggggacg cccggcgcat caaagagctc
780
atcagcgagg gggcagacgt caacgtcaag gacttcgcag gctggacggc gctgcacgag
840
gcctgtaacc ggggctacta cgacgtcgcg aagcagctgc tggtgcagg tgcgagggtg
900
aacaccaagg gcctagatga cgacacgcct ttgcacgacg ctgccaaaca cgggcactac
960
aagggtgtga agctgctgct gcggtacgga gggaaccgcg agcagagcaa caggaaaggc
1020
gagacgcgcg tgaaagtggc caactcccc acgatggtga acctcctgtt aggcaaaggc
1080
acttacactt ccagcgagga gagctcgacg gagagctcag aagaggaaga cgcaccatcc
1140
ttcgcacctt ccagttcagt cgacggcaac aacacggact ccgagttcga aaaaggcctc
1200
aagcacaagg ccaagaaccc agagccacag aaggccacgg ccccgctcaa ggacgagtat
1260
gagtttgatg aggacgacga gcaggacagg gtctctccgg tggacgacaa gcacctattg
1320

```

aaaaaggact acagaaaaga aacgaaatcc aatagtttta tctctatacc caaatggag
 1380
 gttaaaagt acactaaaaa taacacgatt gcaccaaaga aagcgtecca tcgtatcctg
 1440
 tcagacacgt cggacgagga ggacgcgagt gtcaccgtgg ggacaggaga gaagctgaga
 1500
 ctctcggcac atacgatatt gcctggtagt aagacacgag agccttctaa tgccaagcag
 1560
 cagaaggaaa aaaataaagt gaaaaagaag cgaaagaaag aaacaaaagg cagagaggtt
 1620
 cgcttcggaa agcggagcna tagttctgct cctcggagtc ggagagcgag tcctcagaga
 1680
 gtggggagga tgacaggac tctctgggga gctctggctg cctcaagggg tccccgctgg
 1740
 tgctgaagga cccctccctg ttcagctccc tctctgectc ctccacctcg tctcacggga
 1800
 gctctgccgc ccagaagcag aacccagacc acacagacca gcacaccaag cactggcgga
 1860
 cagacaattg gaaaaccatt tcttccccgg cttggtcaga ggtcagttct ttatcagact
 1920
 ccacaaggac gagactgaca agcgagtct
 1949

<210> 6150

<211> 508

<212> PRT

<213> Homo sapiens

<400> 6150

Met	Pro	Lys	Gly	Gly	Cys	Pro	Lys	Ala	Pro	Gln	Gln	Glu	Glu	Leu	Pro
1			5					10						15	
Leu	Ser	Ser	Asp	Met	Val	Glu	Lys	Gln	Thr	Gly	Lys	Lys	Asp	Lys	Asp
			20					25					30		
Lys	Val	Ser	Leu	Thr	Lys	Thr	Pro	Lys	Leu	Glu	Arg	Gly	Asp	Gly	Gly
			35				40					45			
Lys	Glu	Val	Arg	Glu	Arg	Ala	Ser	Lys	Arg	Lys	Leu	Pro	Phe	Thr	Ala
			50			55					60				
Gly	Ala	Asn	Gly	Glu	Gln	Lys	Asp	Ser	Asp	Thr	Glu	Lys	Gln	Gly	Pro
65					70					75				80	
Glu	Arg	Lys	Arg	Ile	Lys	Lys	Glu	Pro	Val	Thr	Arg	Lys	Ala	Gly	Leu
			85					90						95	
Leu	Phe	Gly	Met	Gly	Leu	Ser	Gly	Ile	Arg	Ala	Gly	Tyr	Pro	Leu	Ser
			100					105					110		
Glu	Arg	Gln	Gln	Val	Ala	Leu	Leu	Met	Gln	Met	Thr	Ala	Glu	Glu	Ser
			115				120					125			
Ala	Asn	Ser	Pro	Val	Asp	Thr	Thr	Pro	Lys	His	Pro	Ser	Gln	Ser	Thr
			130				135					140			
Val	Cys	Gln	Lys	Gly	Thr	Pro	Asn	Ser	Ala	Ser	Lys	Thr	Lys	Asp	Lys
145					150					155				160	
Leu	Asn	Lys	Arg	Asn	Glu	Arg	Gly	Glu	Thr	Arg	Leu	His	Arg	Ala	Ala
			165					170						175	
Ile	Arg	Gly	Asp	Ala	Arg	Arg	Ile	Lys	Glu	Leu	Ile	Ser	Glu	Gly	Ala
			180					185					190		
Asp	Val	Asn	Val	Lys	Asp	Phe	Ala	Gly	Trp	Thr	Ala	Leu	His	Glu	Ala


```

      195              200              205
Cys Asn Arg Gly Tyr Tyr Asp Val Ala Lys Gln Leu Leu Ala Ala Gly
  210              215              220
Ala Glu Val Asn Thr Lys Gly Leu Asp Asp Thr Pro Leu His Asp
225              230              235              240
Ala Ala Asn Asn Gly His Tyr Lys Val Val Lys Leu Leu Leu Arg Tyr
      245              250              255
Gly Gly Asn Pro Gln Gln Ser Asn Arg Lys Gly Glu Thr Pro Leu Lys
      260              265              270
Val Ala Asn Ser Pro Thr Met Val Asn Leu Leu Leu Gly Lys Gly Thr
      275              280              285
Tyr Thr Ser Ser Glu Glu Ser Ser Thr Glu Ser Ser Glu Glu Glu Asp
      290              295              300
Ala Pro Ser Phe Ala Pro Ser Ser Ser Val Asp Gly Asn Asn Thr Asp
305              310              315              320
Ser Glu Phe Glu Lys Gly Leu Lys His Lys Ala Lys Asn Pro Glu Pro
      325              330              335
Gln Lys Ala Thr Ala Pro Val Lys Asp Glu Tyr Glu Phe Asp Glu Asp
      340              345              350
Asp Glu Gln Asp Arg Val Pro Pro Val Asp Asp Lys His Leu Leu Lys
      355              360              365
Lys Asp Tyr Arg Lys Glu Thr Lys Ser Asn Ser Phe Ile Ser Ile Pro
      370              375              380
Lys Met Glu Val Lys Ser Tyr Thr Lys Asn Asn Thr Ile Ala Pro Lys
385              390              395              400
Lys Ala Ser His Arg Ile Leu Ser Asp Thr Ser Asp Glu Glu Asp Ala
      405              410              415
Ser Val Thr Val Gly Thr Gly Glu Lys Leu Arg Leu Ser Ala His Thr
      420              425              430
Ile Leu Pro Gly Ser Lys Thr Arg Glu Pro Ser Asn Ala Lys Gln Gln
      435              440              445
Lys Glu Lys Asn Lys Val Lys Lys Lys Arg Lys Lys Glu Thr Lys Gly
      450              455              460
Arg Glu Val Arg Phe Gly Lys Arg Ser Xaa Ser Ser Ala Pro Arg Ser
465              470              475              480
Arg Arg Ala Ser Pro Gln Arg Val Gly Arg Met Thr Gly Thr Leu Trp
      485              490              495
Gly Ala Leu Ala Ala Ser Arg Gly Pro Arg Trp Cys
      500              505

```

<210> 6151

<211> 648

<212> DNA

<213> Homo sapiens

<400> 6151

```

tttttttttt ttttttttga aggggtgagaa atttattcag atttcttcat aattcccccc
60
aaaagctcca accacgttgc cagtccttgg gtgctgcagt tggtcgggga gaggggctgt
120
gtggagggtca ccttctggtg gacggagacc cgcttttcag actctgtggc gcagcaggcg
180
ggccaggaac atttgggcca ctattgetct tagcctgccc gcgcctgact ttctctctc
240

```

tacttttcctt ccgaccgtag ggacaagtgt ggggatccgc tttgggctcc aaggccctgc
 300
 ccgcactggc agcaccaagc ggggtgtagaa tgactggaag gagcagggaa ggaagatggg
 360
 tgtcaactgt cccggccagt ggctgcgtgc atgtgtgtgt gaacagggaa aaggccaccc
 420
 tctcccatgt ttctcccgtc tcctcggttc tcctcggaga cccgcagggc tgcccagaggt
 480
 agctccgagt tgccctgggt cgctggggct tggtcgcgat cctcctccgc tagtccgctc
 540
 ccgcgttcca cagcgccccg ccgctcggtg tgcaecgact gcggcttaac ccagccgaca
 600
 aggcacgctt gccaaagagg cgcgggtgtg tgtgtgcggg gtccgcgg
 648

<210> 6152
 <211> 130
 <212> PRT
 <213> Homo sapiens

<400> 6152
 Met Arg Thr Lys Pro Gln Arg Pro Arg Ala Thr Arg Ser Tyr Leu Gly
 1 5 10 15
 Gln Pro Cys Gly Ser Pro Arg Arg Thr Glu Glu Thr Gly Glu Thr Trp
 20 25 30
 Glu Arg Val Ala Phe Ser Leu Phe Thr His Thr Cys Thr Gln Pro Leu
 35 40 45
 Ala Gly Thr Val Asp Thr His Leu Pro Ser Leu Leu Leu Pro Val Ile
 50 55 60
 Leu His Pro Leu Gly Ala Ala Ser Ala Gly Arg Ala Leu Glu Pro Lys
 65 70 75 80
 Ala Asp Pro His Thr Cys Pro Tyr Gly Arg Lys Glu Ser Arg Gly Glu
 85 90 95
 Lys Val Arg Arg Gly Arg Ala Lys Ser Asn Ser Gly Pro Asn Val Pro
 100 105 110
 Gly Pro Pro Ala Ala Pro Gln Ser Leu Lys Ser Gly Ser Pro Ser Thr
 115 120 125
 Arg Arg
 130

<210> 6153
 <211> 1810
 <212> DNA
 <213> Homo sapiens

<400> 6153
 gatgcagtta cctgtgtgga cttcagtatc aacacaaagc agctggccag tggtnccatg
 60
 gactcatgcc tcatggctctg gcacatgaag ctgcagtcac gcgcctaccg cttcactggc
 120
 cacaaggatg ccgtcacctg tgtgaacttc tctccttcgg gacacctgct tgettccggc
 180
 tcccagagaca agactgtccg catctgggta cccaatgtca aaggtgagtc cactgtgttt
 240

cgtgcacaca cagccacagt gaggagtgtc cacttctgca gtgatggcca gtccttcgtg
300
acagcctctg acgacaagac agtcaaagtg tgggcaactc atcgccagaa attcctgttc
360
tccctgagcc agcatatcaa ctgggtccgc tgtgccaaagt tctccccga cgggcggctc
420
atcgtgtctg ccagtgatga caagactgtt aagctgtggg acaagagcag ccgggaatgt
480
gtccactcgt attgtgagca tggcggcttt gtcacctatg tggacttcca cccagtgagg
540
acgtgcattg ccgctgccgg catggacaac acagtgaagg tgtgggacgt gcggactcac
600
cggctgctgc agcattatca gttgcacagt gcagcagtga acgggctctc tttccaccg
660
tcgggaaact acctgatcac agcctccagt gactcaacct tgaagatcct ggacctgatg
720
gagggccggc tgctctacac actccacggg catcaggagc cagccaccac tgttgccctt
780
tcaagaacgg gggagtatct tgcctctgga ggctctgatg aacaagtgat ggtttggaag
840
agtaactttg atattgttga tcatggagaa gtcacgaaag tgccgaggcc cccagccaca
900
ctggccagct ccatggggaa tctgccagaa gtggacttcc ctgtccccc aggcagaggc
960
tgagtggtgg agtctgtgca gagccagccc caggagccc tgagtgtgcc ccagacactg
1020
actagcacgc tggagcacat tgtgggccag ctggatgtcc tcaactcagac agtctccatt
1080
ctggagcagc ggttgacact gacagaagac aagctgaagc agtgtctgga gaaccagcag
1140
ctaatacatg agagagcaac accatgatca ggggagcagg aatcaggagc tcggtggatt
1200
tgcaggtggc agggccagga tttgtaccat gggacttggg taaataaagg ggactgaact
1260
ctgtgggaat cacatccata ctggagccct ggatttttgc agttctgccc tccaccttgc
1320
tatctgcacc agggagctct ccacctggca gccagaggtc cccagtgggc cgggctcaca
1380
cacaaatgat gcttcagacc cgaatgagag gaccacattt tgcttaatgt aaaggagcca
1440
cttgaaaatg tctgtcctt cggggtcctg agattgtggc tccccctctg gaggaggtgg
1500
ctccacgatg ccttgatttt cactcatcat ttggacatgt gactggcttt tectacctct
1560
gccatggtgt agaaattgat tgcacattga ttggatgagc cgggggtttt ctctaaatct
1620
gactaaaggc ccaaagtggg cccatctgag tcaggtttgt tgagaacaag ccctctcaag
1680
tgggtgggtg cttttcagtg gccctgattt ctgttcaca cgtgttcact ggagccaggt
1740
gacttcctcc ttgctgagt gagggcacag gaatctcaa attaaacctg acttcattgc
1800
aaaaaaaaa
1810

<210> 6154
 <211> 388
 <212> PRT
 <213> Homo sapiens

<400> 6154

```

Asp Ala Val Thr Cys Val Asp Phe Ser Ile Asn Thr Lys Gln Leu Ala
 1           5           10           15
Ser Gly Xaa Met Asp Ser Cys Leu Met Val Trp His Met Lys Leu Gln
 20           25           30
Ser Arg Ala Tyr Arg Phe Thr Gly His Lys Asp Ala Val Thr Cys Val
 35           40           45
Asn Phe Ser Pro Ser Gly His Leu Leu Ala Ser Gly Ser Arg Asp Lys
 50           55           60
Thr Val Arg Ile Trp Val Pro Asn Val Lys Gly Glu Ser Thr Val Phe
 65           70           75           80
Arg Ala His Thr Ala Thr Val Arg Ser Val His Phe Cys Ser Asp Gly
 85           90           95
Gln Ser Phe Val Thr Ala Ser Asp Asp Lys Thr Val Lys Val Trp Ala
 100          105          110
Thr His Arg Gln Lys Phe Leu Phe Ser Leu Ser Gln His Ile Asn Trp
 115          120          125
Val Arg Cys Ala Lys Phe Ser Pro Asp Gly Arg Leu Ile Val Ser Ala
 130          135          140
Ser Asp Asp Lys Thr Val Lys Leu Trp Asp Lys Ser Ser Arg Glu Cys
 145          150          155          160
Val His Ser Tyr Cys Glu His Gly Gly Phe Val Thr Tyr Val Asp Phe
 165          170          175
His Pro Ser Gly Thr Cys Ile Ala Ala Ala Gly Met Asp Asn Thr Val
 180          185          190
Lys Val Trp Asp Val Arg Thr His Arg Leu Leu Gln His Tyr Gln Leu
 195          200          205
His Ser Ala Ala Val Asn Gly Leu Ser Phe His Pro Ser Gly Asn Tyr
 210          215          220
Leu Ile Thr Ala Ser Ser Asp Ser Thr Leu Lys Ile Leu Asp Leu Met
 225          230          235          240
Glu Gly Arg Leu Leu Tyr Thr Leu His Gly His Gln Gly Pro Ala Thr
 245          250          255
Thr Val Ala Phe Ser Arg Thr Gly Glu Tyr Phe Ala Ser Gly Gly Ser
 260          265          270
Asp Glu Gln Val Met Val Trp Lys Ser Asn Phe Asp Ile Val Asp His
 275          280          285
Gly Glu Val Thr Lys Val Pro Arg Pro Pro Ala Thr Leu Ala Ser Ser
 290          295          300
Met Gly Asn Leu Pro Glu Val Asp Phe Pro Val Pro Pro Gly Arg Gly
 305          310          315          320
Trp Ser Val Glu Ser Val Gln Ser Gln Pro Gln Glu Pro Val Ser Val
 325          330          335
Pro Gln Thr Leu Thr Ser Thr Leu Glu His Ile Val Gly Gln Leu Asp
 340          345          350
Val Leu Thr Gln Thr Val Ser Ile Leu Glu Gln Arg Leu Thr Leu Thr
 355          360          365
Glu Asp Lys Leu Lys Gln Cys Leu Glu Asn Gln Gln Leu Ile Met Gln

```

370
Arg Ala Thr Pro
385

375

380

<210> 6155
<211> 995
<212> DNA
<213> Homo sapiens

<400> 6155
aacagccaca gacgtatgtg taatatgatg ggctttagaa tgtacctgca aagcagtttt
60
tttttttttt ccatttgag gaaaaaagat gaacaaaaa agactgaatt gggatgctaa
120
aataacacgg atttattatt aaggaaatga tacgttttg tccattcaa ataagtgttt
180
tattccctt ttctttatc ttgggaggtt cctattgttg tgccaggctg ttttactga
240
acgattttta aaggatttca ccagtccac gtgtgaccgg ttgcattttt actgtgcagg
300
accatcgtga agcctgtggc caaagagttt gatccagaca tggctctagt atctgctgga
360
tttgatgcat tggaaggcca caccctcct ctaggagggg acaaagtac ggcaaaatgt
420
tttggtcatt tgacgaagca attgatgaca ttggctgatg gacgtgtggt gttggctcta
480
gaaggaggac atgatctcac agccatctgt gatgatcag aagcctgtgt aaatgccctt
540
ctaggaaatg agctggagcc acttgacaga gatattctcc accaaagccc gaatatgaat
600
gctgttattt ctttacagaa gatcattgaa attcaaaaac tgctggtgag cctatggaag
660
aggagccagc cttgtgaagt gccagtcct cctctgatat ttctgtgtg tgacatcatt
720
gtgtatcccc ccacccagc accctcagac atgtcttgct tgctgcctgg gtggcacaga
780
ttcaatggaa cataaacact gggcacaaaa ttctgaacag cagcttcact tgttcttgg
840
atggacttga aagggcatta aagattcctt aaacgtaacc gctgtgattc tagagttaca
900
gtaaaccacg attggaagaa actgcttcca gcatgctttt aatatgctgg gtgaccact
960
cctagacacc aagtttgaac tagaaacatt cagta
995

<210> 6156
<211> 164
<212> PRT
<213> Homo sapiens

<400> 6156
Thr Ile Val Lys Pro Val Ala Lys Glu Phe Asp Pro Asp Met Val Leu
1 5 10 15
Val Ser Ala Gly Phe Asp Ala Leu Glu Gly His Thr Pro Pro Leu Gly

	20		25		30										
Gly	Tyr	Lys	Val	Thr	Ala	Lys	Cys	Phe	Gly	His	Leu	Thr	Lys	Gln	Leu
	35		40		45										
Met	Thr	Leu	Ala	Asp	Gly	Arg	Val	Val	Leu	Ala	Leu	Glu	Gly	Gly	His
	50		55		60										
Asp	Leu	Thr	Ala	Ile	Cys	Asp	Ala	Ser	Glu	Ala	Cys	Val	Asn	Ala	Leu
65			70		75									80	
Leu	Gly	Asn	Glu	Leu	Glu	Pro	Leu	Ala	Glu	Asp	Ile	Leu	His	Gln	Ser
		85			90								95		
Pro	Asn	Met	Asn	Ala	Val	Ile	Ser	Leu	Gln	Lys	Ile	Ile	Glu	Ile	Gln
	100				105								110		
Lys	Leu	Leu	Val	Ser	Leu	Trp	Lys	Arg	Ser	Gln	Pro	Cys	Glu	Val	Pro
	115				120								125		
Ser	Pro	Pro	Leu	Ile	Phe	Pro	Val	Cys	Asp	Ile	Ile	Val	Tyr	Pro	Pro
	130				135								140		
Thr	Pro	Val	Pro	Ser	Asp	Met	Ser	Cys	Leu	Leu	Pro	Gly	Trp	His	Arg
145				150						155				160	
Phe	Asn	Gly	Thr												

<210> 6157

<211> 2135

<212> DNA

<213> Homo sapiens

<400> 6157

natttcattt tatcccaact acttttgagg taggtattat cctgtttttac aaacgaagaa
 60
 actaaggctc agtgagatta atgateccaag gtcataataa ctaagtggta gagctgggat
 120
 ttgaacttca gtttgactaa ctatgaaact tttaactgct attctttctc aactttcctt
 180
 tttctgcag gatctggcga catggccaga aaggctctca agcttgcttc gtggaccagc
 240
 atggctcttg ctgcctctgg catctacttc tacagtaaca agtacttggc ccctaatagac
 300
 ttggcgctg tcagggtggg cagagcagtt gctacgacgg ctgtcatcag ttacgactac
 360
 ctcaactccc tgaagagtgt cccttatggc tcagaggagt acttgcagct gagatctaag
 420
 atccatgatt tgttccagag ctctgatgac acccctctgg ggacggcctc cctggcccag
 480
 gtccacaagg cagtgcctga tgatgggagg acggtggcgg tgaaggtcca gcacccaaag
 540
 gtgcgggctc agagctcgaa ggacattctc ctgatggagg tgctcgttct ggctgtgaag
 600
 cagctgttcc cagagtttga gtttatgtgg cttgtggatg aagccaagaa gaacctgcct
 660
 ttggagctgg atttctcaa tgaaggagg aatgctgaga aggtgtccca gatgctcagg
 720
 cattttgact tcttgaaggt ccccgaaac cactgggacc tgteccagga gcgggtcctc
 780
 ctgatggagt ttgtggatgg cgggcaggtc aatgacagag actacatgga gaggaacaag
 840

atcgacgtca atgagatctc acgccacctg ggcaagatgt atagtgagat gatcttcgtc
 900
 aatggetteg tgcactgcca tccccacccc ggcaacgtac tgggtgcggaa gcaccccggc
 960
 acgggaaagg cggagattgt cctgttgga ccatgggcttt accagatgct cacggaagaa
 1020
 ttccgcctga attactgcca cctctggcag tctctgatct ggactgacat gaagagagt
 1080
 aaggagtaca gccagcgact gggagccggg gatctctacc ccttgtttgc ctgcatgctg
 1140
 acggcgcgat cgtgggactc ggtcaacaga ggcatcagcc aagctcccg cactgccact
 1200
 gaggacttag agattcgcaa caacgcggcc aactacctcc cccagatcag ccattctctc
 1260
 aaccaegtgc cgcgccagat gctgctcatc ttgaagacca acgacctgct gcgtggcatt
 1320
 gaggcgcgcc tgggcacccc cgccagcgcc agctcctttc tcaacatgtc acgttgctgc
 1380
 atcagagcgc tagctgagca caagaagaag aatacctgtt cattcttcag aaggaccag
 1440
 atctctttca gcgaggcctt caacttatgg cagatcaacc tccatgagct catcctgcgt
 1500
 gtgaaggggt tgaagctggc tgaccgggtc ttggccctaa tatgctggct gttccctgct
 1560
 ccactctgag tggaattgct ctccctgccc cattctgggtg tctttccact cctcagcccc
 1620
 tcatcttgcc tccaccagc tgetccattt ttgccacatc gtggcccga gcccagagt
 1680
 cactgtccat gtcaccatcc ttctctctct ttggaatcct ctccgcacac tgtggccctt
 1740
 gtctcagggc ccacaagctg aactgtggca tagctctctc ttcttctcca agaagactca
 1800
 gcagcctaca ttccattcc tggatgtgc cattgggttg gatgtccca ctacttccgt
 1860
 taacccttcc cattgtcaag atgtgccacg ggtgccactg ggggcacact gaactgtag
 1920
 ggagtgtgat tttgttggag gtgcacatgg tctctgaatt tgacagagaa caccttccct
 1980
 ttcttgcca tgtcaccctc cagaggaagt cacacctcag cgagggtggt tggcatctgg
 2040
 ggccaactcc attacagcta tgagctcact gctgtcagtg acgtttggtg ttttctgtac
 2100
 tgtgtttcaa taaaaactcc ttcaagggtg aaaaa
 2135

<210> 6158

<211> 455

<212> PRT

<213> Homo sapiens

<400> 6158

Met Ala Arg Lys Ala Leu Lys Leu Ala Ser Trp Thr Ser Met Ala Leu
 1 5 10 15
 Ala Ala Ser Gly Ile Tyr Phe Tyr Ser Asn Lys Tyr Leu Asp Pro Asn

				20						25					30				
Asp	Phe	Gly	Ala	Val	Arg	Val	Gly	Arg	Ala	Val	Ala	Thr	Thr	Ala	Val				
		35					40					45							
Ile	Ser	Tyr	Asp	Tyr	Leu	Thr	Ser	Leu	Lys	Ser	Val	Pro	Tyr	Gly	Ser				
	50					55					60								
Glu	Glu	Tyr	Leu	Gln	Leu	Arg	Ser	Lys	Ile	His	Asp	Leu	Phe	Gln	Ser				
65					70					75					80				
Phe	Asp	Asp	Thr	Pro	Leu	Gly	Thr	Ala	Ser	Leu	Ala	Gln	Val	His	Lys				
				85					90					95					
Ala	Val	Leu	His	Asp	Gly	Arg	Thr	Val	Ala	Val	Lys	Val	Gln	His	Pro				
			100					105					110						
Lys	Val	Arg	Ala	Gln	Ser	Ser	Lys	Asp	Ile	Leu	Leu	Met	Glu	Val	Leu				
		115					120					125							
Val	Leu	Ala	Val	Lys	Gln	Leu	Phe	Pro	Glu	Phe	Glu	Phe	Met	Trp	Leu				
	130					135					140								
Val	Asp	Glu	Ala	Lys	Lys	Asn	Leu	Pro	Leu	Glu	Leu	Asp	Phe	Leu	Asn				
145					150					155				160					
Glu	Gly	Arg	Asn	Ala	Glu	Lys	Val	Ser	Gln	Met	Leu	Arg	His	Phe	Asp				
			165						170					175					
Phe	Leu	Lys	Val	Pro	Arg	Ile	His	Trp	Asp	Leu	Ser	Thr	Glu	Arg	Val				
			180					185					190						
Leu	Leu	Met	Glu	Phe	Val	Asp	Gly	Gly	Gln	Val	Asn	Asp	Arg	Asp	Tyr				
	195					200					205								
Met	Glu	Arg	Asn	Lys	Ile	Asp	Val	Asn	Glu	Ile	Ser	Arg	His	Leu	Gly				
	210				215						220								
Lys	Met	Tyr	Ser	Glu	Met	Ile	Phe	Val	Asn	Gly	Phe	Val	His	Cys	Asp				
225					230					235				240					
Pro	His	Pro	Gly	Asn	Val	Leu	Val	Arg	Lys	His	Pro	Gly	Thr	Gly	Lys				
			245						250					255					
Ala	Glu	Ile	Val	Leu	Leu	Asp	His	Gly	Leu	Tyr	Gln	Met	Leu	Thr	Glu				
			260					265					270						
Glu	Phe	Arg	Leu	Asn	Tyr	Cys	His	Leu	Trp	Gln	Ser	Leu	Ile	Trp	Thr				
	275					280					285								
Asp	Met	Lys	Arg	Val	Lys	Glu	Tyr	Ser	Gln	Arg	Leu	Gly	Ala	Gly	Asp				
	290				295						300								
Leu	Tyr	Pro	Leu	Phe	Ala	Cys	Met	Leu	Thr	Ala	Arg	Ser	Trp	Asp	Ser				
305				310						315				320					
Val	Asn	Arg	Gly	Ile	Ser	Gln	Ala	Pro	Val	Thr	Ala	Thr	Glu	Asp					

450

455

<210> 6159

<211> 4310

<212> DNA

<213> Homo sapiens

<400> 6159

ctcgagggtgc gcgccggccc ggactcggcg ggcacgccc tctacagcca tgaagatgtg
60
tgtgtcttta agtgctcagt gtcccagag acagagtgc gccgtgtggg caagcagtc
120
ttcatcatca ccttgggctg caacagcgtc ctcatccagt tcgccacacc caacgatttc
180
tggtccttct acaacatcct gaaaacctgc cggggccaca ccctggagcg gtctgtgttc
240
agcgagcggga cggaggagtc ttctgccgtg cagtacttcc agttttatgg ctacctgtcc
300
cagcagcaga acatgatgca ggactacgtg cggacaggca cctaccagcg cgccatcctg
360
caaaaccaca ccgacttcaa ggacaagatc gttcttgatg ttggctgtgg ctctgggac
420
ctgtcgtttt ttgccgccca agctggagca cggaaaatct acgcggtgga ggccagcacc
480
atggcccagc acgctgaggt cttggtgaag agtaacaacc tgacggaccg catcgtggtc
540
atcccgggca aggtggagga ggtgtcactc cccgagcagg tggacatcat catctcggag
600
cccattgggt acatgctctt caacgagcgc atgctggaga gctacctcca cgccaagaag
660
tacctgaagc ccagcggaaa catgtttcct accattgggt acgtccacct tgcacccttc
720
acggatgaac agctctacat ggagcagttc accaaggcca acttctggtg ccagccatct
780
ttccatggag tggacctgtc ggccctccga ggtgccgcgg tggatgagta tttccggcag
840
cctgtggtgg acacatttga catccggatc ctgatggcca agtctgtcaa gtacacggtg
900
aacttcttag aagccaaaga aggagatttg cacaggatag aaatcccatt caaatccac
960
atgtgcatt cagggtggt ccacggcctg gctttctggt ttgacgttgc tttcatcggc
1020
tccataatga ccgtgtggct gtccacagcc ccgacagagc cctgaccca ctggtaccag
1080
gtgcggtgcc tgttcagtc accactgttc gccaaaggcagg gggacacgct ctcagggaca
1140
tgtctgttta ttgccaacaa aagacagagc tacgacatca gtattgtggc ccagggtggac
1200
cagaccggct ccaagtccag taacctcctg gatctgaaaa accccttctt tagatacacg
1260
ggcacaacgc cctcaccccc acccggtcc cactacacat ctccctcgga aaacatgtgg
1320
aacacgggca gcacctacaa cctcagcagc gggatggccg tggcagggat gccgaccgcc
1380

tatgacttga gcagtggttat tgccagtggc tccagcgtgg gccacaacaa cctgattcct
1440
ttagccaaca cggggattgt caatcacacc cactcccga tgggctccat aatgagcacg
1500
gggattgtcc aagggtcctc cggcgcccag ggcagtgggtg gtggcagcac gagtgccac
1560
tatgcagtca acagccagtt caccatgggc ggccccgcca tctccatggc gtcgcccag
1620
tccatcccga ccaacacccat gcactacggg agctagggggc ccgccccgcg gactgacagc
1680
accaggaaac caaatgatgt ccttgcccgc cgccccgcgc gggcggtttt ccccttgta
1740
ctggagaagc tcgaacaccc ggctcacagt ctctttgcta tgggaactgg gacacttttt
1800
tacacgatgt tgccgcccgc cccaccctaa ccccccctc ccggccctga gcgtgtgtcg
1860
ctgccatatt ttacacaaaa tcatgttggtg ggagccctcg tccccctcc tgcccgtctc
1920
accctgacct gggcttgta tctgtggaa caggcgccat ggggctgcc agccctgcct
1980
gccaggctcc ttagcacctg tccccctgcc tgtctccagt gggaaggtag cctggccagg
2040
cggggcctcc ccttcgacga ccaggcctcg gtcacaacgg acgtgacatg ctgctttttt
2100
taattttatt tttttatgaa aagaaccagt gtcaatccgc agaccctctg tgaagccagg
2160
ccggccgggc cgagccagca gcccctctcc ctagactcag aggcgcgcgc gggaggggtg
2220
gccccgccga ggcttcaggg gccccctccc caccaaaagg ttcacctcac acttgaatgt
2280
acaaccaccc cactgtcgg gaaggcctcc gtctcggcc cctgcctctt gctgctgtcc
2340
tgtccccgag ccctgcagg tcccccccg cccccccact caagagttag agcagggtgg
2400
tgcaggcctt gggcccggag ggaaggccac tgccggccac ttggggcaga cacagacacc
2460
tcaaggatct gtcacggaag gcgtcctttt tccttgtagc taacgttagg cctgagtagc
2520
tcccctccat ccttgtagac gctccagtc ctactactgt gacggcattt ccacccctcc
2580
cctgcccggg aagggaacct gcagggacct ctccctccaa aaaaagaaaa aaagaaaaag
2640
aaagaaaaaa taaatgagga aacgtgttgc agcacaggca gttttcttct ccttctgtc
2700
ccctgtttct cataccccca aactcagatg ctggagctca ggcccgcgt gtgtgcaccc
2760
aggcaggagc gggcgctgtc caggctgggc cgcccccttg gctctccctc ctgttccagg
2820
ggagccatag gagggaaagc aggtggcccg ggggggatat gggggcccca gccctgtccc
2880
aaagctccct gctcggtgc cctcgcccg cctttatata aattctctga atcaccttg
2940
catagaaaat aaaagtgttt gctttgtaag aaaagtctgg aaagtagcag aatcatctca
3000

aggtgtcaaa ggagccttca gtcacgtctt ggggggcagg acaggcagag gggttggtcc
 3060
 acttaggtgt tgccctgaaag aaagaattgt ctgtgggacc cgggccttcc taggaggggg
 3120
 ccaggggactg cggcaaggta ggggacagcg cgatgtttga gggcagagat gtgatttggg
 3180
 gtggaggagc cacgttctcc ggaggcagcg actggaagaa gtacaactta cagcccatgg
 3240
 ccaggagggc gtggagcagc acgaccacgg acagcagcac tgtggccacc agcctgggtg
 3300
 cctcacggac cacgggccag aggggtgaata ccagcccggc ggctgacagg cccaggggcca
 3360
 gcgccccaaa gagccactgc agccaaggca cagggatgag ccacaggacc accatggggg
 3420
 tgaagacaaa gagggagtag ccgtagatgc acacagtctc caggaagggtg tagggcccca
 3480
 tgcgctcctg gacacccttg cgcaccgca ggaagcccca cagggccagg ggcaccagcc
 3540
 acgcatagca gtagatgctg atgcctgcc aagtcacctt gtggaactgg gggctgtagt
 3600
 ggatggaggg gtcctctctc tgggccagca ccagcgtcag gttgccagtg acggccagga
 3660
 caaaggccaa cgtggcacag atccagaagg ggccatacag atccggccga ttccgcagat
 3720
 ggtgccgcac aaagtgtgtg ccaggccggg gcagcagtga gcctttgatc cggctccagga
 3780
 cctgtgaggt gtccacgtca aagaagctct gatagtagct gaagggtccag aatcccggct
 3840
 gctgctgctg ctgctgctcc tgcaggagcg cggccttgtc actctctcc tccacctcat
 3900
 cctcggctcc atagctgcc aatgagccca cggccacagc cacgtgccct tgtgggggtca
 3960
 gctgacgct tctgctgggtg gtggctgcat ctgggggtgc agccagaaga ttagtggcct
 4020
 cctegaattc atggaaggct agctcgctcg ccgatgccat ggtcggtcag gggcgctctcc
 4080
 gcatccctcg ctggcgacca actgcaccca cggaggcttg aactcgctgt cccgtcccca
 4140
 caggtgcgct ccgccccccc tcacctgagg ccacctgggc cggcgtggct ggggctcact
 4200
 cctgtgcctt ggctgcagtg gctctttggg gcgctggccc tgggcctgtc agccgcccgg
 4260
 ctgggtattca ccctctggcc cgtgggtccgt gaggacacca ggctgggtggc
 4310

<210> 6160

<211> 551

<212> PRT

<213> Homo sapiens

<400> 6160

Leu Glu Val Arg Ala Gly Pro Asp Ser Ala Gly Ile Ala Leu Tyr Ser
 1 5 10 15
 His Glu Asp Val Cys Val Phe Lys Cys Ser Val Ser Arg Glu Thr Glu

			20					25					30				
Cys	Ser	Arg	Val	Gly	Lys	Gln	Ser	Phe	Ile	Ile	Thr	Leu	Gly	Cys	Asn		
		35					40					45					
Ser	Val	Leu	Ile	Gln	Phe	Ala	Thr	Pro	Asn	Asp	Phe	Cys	Ser	Phe	Tyr		
	50					55					60						
Asn	Ile	Leu	Lys	Thr	Cys	Arg	Gly	His	Thr	Leu	Glu	Arg	Ser	Val	Phe		
65					70					75					80		
Ser	Glu	Arg	Thr	Glu	Glu	Ser	Ser	Ala	Val	Gln	Tyr	Phe	Gln	Phe	Tyr		
				85					90					95			
Gly	Tyr	Leu	Ser	Gln	Gln	Gln	Asn	Met	Met	Gln	Asp	Tyr	Val	Arg	Thr		
			100				105						110				
Gly	Thr	Tyr	Gln	Arg	Ala	Ile	Leu	Gln	Asn	His	Thr	Asp	Phe	Lys	Asp		
	115					120						125					
Lys	Ile	Val	Leu	Asp	Val	Gly	Cys	Gly	Ser	Gly	Ile	Leu	Ser	Phe	Phe		
	130					135					140						
Ala	Ala	Gln	Ala	Gly	Ala	Arg	Lys	Ile	Tyr	Ala	Val	Glu	Ala	Ser	Thr		
145					150					155					160		
Met	Ala	Gln	His	Ala	Glu	Val	Leu	Val	Lys	Ser	Asn	Asn	Leu	Thr	Asp		
			165						170					175			
Arg	Ile	Val	Val	Ile	Pro	Gly	Lys	Val	Glu	Glu	Val	Ser	Leu	Pro	Glu		
			180					185						190			
Gln	Val	Asp	Ile	Ile	Ile	Ser	Glu	Pro	Met	Gly	Tyr	Met	Leu	Phe	Asn		
	195					200						205					
Glu	Arg	Met	Leu	Glu	Ser	Tyr	Leu	His	Ala	Lys	Lys	Tyr	Leu	Lys	Pro		
	210				215							220					
Ser	Gly	Asn	Met	Phe	Pro	Thr	Ile	Gly	Asp	Val	His	Leu	Ala	Pro	Phe		
225				230						235					240		
Thr	Asp	Glu	Gln	Leu	Tyr	Met	Glu	Gln	Phe	Thr	Lys	Ala	Asn	Phe	Trp		
			245						250					255			
Tyr	Gln	Pro	Ser	Phe	His	Gly	Val	Asp	Leu	Ser	Ala	Leu	Arg	Gly	Ala		
		260						265						270			
Ala	Val	Asp	Glu	Tyr	Phe	Arg	Gln	Pro	Val	Val	Asp	Thr	Phe	Asp	Ile		
	275					280						285					
Arg	Ile	Leu	Met	Ala	Lys	Ser	Val	Lys	Tyr	Thr	Val	Asn	Phe	Leu	Glu		
	290				295						300						
Ala	Lys	Glu	Gly	Asp	Leu	His	Arg	Ile	Glu	Ile	Pro	Phe	Lys	Phe	His		
305					310					315					320		
Met	Leu	His	Ser	Gly	Leu	Val	His	Gly	Leu	Ala	Phe	Trp	Phe	Asp	Val		
			325						330					335			
Ala	Phe	Ile	Gly	Ser	Ile	Met	Thr										

450		455		460
Ser Val Ile Ala Ser Gly	Ser Ser Val Gly His	Asn Asn Leu Ile Pro		
465	470	475	480	
Leu Ala Asn Thr Gly Ile Val	Asn His Thr His Ser Arg Met Gly Ser			
	485	490	495	
Ile Met Ser Thr Gly Ile Val	Gln Gly Ser Ser Gly Ala Gln Gly Ser			
	500	505	510	
Gly Gly Gly Ser Thr Ser Ala His Tyr Ala Val	Asn Ser Gln Phe Thr			
	515	520	525	
Met Gly Gly Pro Ala Ile Ser Met Ala Ser Pro	Met Ser Ile Pro Thr			
	530	535	540	
Asn Thr Met His Tyr Gly Ser				
545	550			

<210> 6161

<211> 1489

<212> DNA

<213> Homo sapiens

<400> 6161

```

ggctgcatga tcttcagcag attcagtaca gaggaagtg agctgtggga gaggaaggag
60
gatgggggaa atggcaagaa aaggagcacc ctgcttagaa agggaacgga gccgggtgtg
120
gtggctcacg cctgcaatcc anacaccttg ggaggccgaa gcaaggagat cacctgagcc
180
caagagtttg agaccaccca catagcaaga ccccatctct attttttga aaaaaaaaaa
240
aaaagcagca accagcagga tgggtggaaa aaagttgctg aaggtctctc aagatcctct
300
ctgcctgctc cttctctcac agagggacag gggaggggtga tgagtcagtg gactgaatgt
360
ccccatgggg atgaaggatg gttgggggtca gggtcctaga gggagggctg gaaggaggga
420
aggagatggc cagagaagga tgtaggacac agaggtgccg ccgtggatca ccaagaggtt
480
caggactggc cagaggaagg agaggagatc aaggcaagca tgaggcactt gggagatgca
540
tctgtgcctg cacacagctg aaatccccag gaaataagac gggagcaggg tgggtttctg
600
cagccgaggt gagaccaaag tgccagctca ctgccacct cagtaaagac taacttgccc
660
ttccccacaa ctcccctccc agaagtagct tgctctctc tgctgccc acatcggggg
720
gctcagggaa agctccccct ccctggacag ctagtgttcc ctaggccaag gccagtccct
780
gcagagatga ggagctggga aatccccctc toccatccc cactgccag cgtgccagat
840
cctgtgctgc gggcttttca cacacagcct cttagacgct tagcctgtga ggcgggtgct
900
gttgtccttc cttcccatth tgcaactgag caaacagcct gaaagagaca aaaaccaggt
960
agttagcatg accccaaagc cactccctgg tctacgctgt tctgcagcct gagectgggg
1020

```

tggccaggtg gggttgtgca gtgagggggg gaaggagaat agccccaaa aatgctgccg
 1080
 gaatggtaaa gggcctggac tgcaaagcta gtgacttgag ctttattttg tggcactgga
 1140
 ggttttccca gtcattgtaa tgatacaatc agatttgcgt tgtcttcaag ttaccatggt
 1200
 aaccgtactt ccaccacca agagtggatt ggagaaggca aaactagggc agagaagcca
 1260
 gggagtgttg agaaggtctg aaccagaca gtgggcagct gggccccaag acggatgggg
 1320
 gactccagaa gcgtggagct ggagagaga aacctgcccg ggcatcaga gaaaagggcg
 1380
 actgtgcagg aacagagtag atgaggtggg gaacctttgg gtaagaagag ctgaatcagg
 1440
 agcattgagg cagcggtttt caaacctcag aagcaacagc agggccggc
 1489

<210> 6162
 <211> 58
 <212> PRT
 <213> Homo sapiens

<400> 6162
 Gly Cys Met Ile Phe Ser Arg Phe Ser Thr Glu Gly Ser Glu Leu Trp
 1 5 10 15
 Glu Arg Lys Glu Asp Gly Gly Asn Gly Lys Lys Arg Ser Thr Leu Leu
 20 25 30
 Arg Lys Gly Thr Glu Pro Gly Val Val Ala His Ala Cys Asn Pro Xaa
 35 40 45
 Thr Leu Gly Gly Arg Ser Lys Glu Ile Thr
 50 55

<210> 6163
 <211> 713
 <212> DNA
 <213> Homo sapiens

<400> 6163
 gtggaaatga gcctctcatt aaaacacgtg ctttctggga gccgtgatga acgtgagtgt
 60
 gagatgagtc cagctgcggt cagagccatg ggatgtgggt cactgtgacc cagtgggtca
 120
 cagggtgctga gcaaggaagg gctgggaggc tcaagcaaaa tctacaagaa aaatctaaag
 180
 gggcccagcc tctgccagga aaagcaggcc tggctctgct gaaaccccaa tcacgctctg
 240
 atggataccg gtacctgggc aaggataccg tggatggact tgattcttct ctctgaaat
 300
 gtacgagaag gtgcatgcgg ggatttcggc tgcctgaaaa gcaaccctct aaaaccgag
 360
 tgtcattttt agaatacaaaa aggaaggaag gcagtggctg gctgcactgg tcagtaacga
 420
 gatctggagc ttttcgcctt aaggtcactg tttaaaactc tgccctgggt cagttgtaac
 480

agaaagtcac aactccctca caggcatcag ggtgcaactt tgaatgccaa gaggggctgt
 540
 gtctgttggt taccacgcgg cgagctcccg ggacacctcc tgacacctcc tgacagtgtc
 600
 tctttcteta ggagtctcct ctcttccac ccaccatggc ggcttggect ggaggggagg
 660
 cattggggac tgagtcttc cccgacaggg agtctctctc cccctggcg cgc
 713

<210> 6164
 <211> 120
 <212> PRT
 <213> Homo sapiens

<400> 6164
 Met Trp Val Thr Val Thr Gln Trp Val Thr Gly Ala Glu Gln Gly Arg
 1 5 10 15
 Ala Gly Arg Leu Lys Gln Asn Leu Gln Glu Lys Ser Lys Gly Ala Gln
 20 25 30
 Pro Leu Pro Gly Lys Ala Gly Leu Ala Leu Leu Lys Pro Gln Ser Arg
 35 40 45
 Ser Asp Gly Tyr Arg Tyr Leu Gly Lys Asp Thr Val Asp Gly Leu Asp
 50 55 60
 Ser Ser Leu Leu Lys Cys Thr Arg Arg Cys Met Arg Gly Phe Arg Leu
 65 70 75 80
 Pro Glu Lys Gln Pro Ser Lys Thr Arg Val Ser Phe Leu Glu Ser Lys
 85 90 95
 Arg Lys Glu Gly Ser Gly Trp Leu His Trp Ser Val Thr Arg Ser Gly
 100 105 110
 Ala Phe Arg Leu Lys Val Thr Val
 115 120

<210> 6165
 <211> 1004
 <212> DNA
 <213> Homo sapiens

<400> 6165
 cccagccgga tcggggggcg aaggccggcg cggcgagcag caacctgtc ggtgttcggg
 60
 aagctgttcg gggctggagg gggtaaggcc ggcaaggcg gcccgacccc ccaggaggcc
 120
 atccagcggc tcggggacac ggaagagatg ttaagcaaga aacaggagtt cctggagaag
 180
 aaaatcgagc aggagctgac ggccgccaag aagcacggca ccaaaaacaa gcgcgcggcc
 240
 ctccaggcac tgaagcgtaa gaagaggtat gagaagcagc tggcgagat cgacggcaca
 300
 ttatcaacca tcgagttcca gcgggaggcc ctggagaatg ccaacaccaa caccgaggtg
 360
 ctcaagaaca tgggctatgc cgccaaggcc atgaaggcg cccatgacaa catggacatc
 420
 gataaagttg atgagttaat gcaggacatt gctgaccagc aagaacttgc agaggagatt
 480

tcaacagcaa tttcgaaacc tgtaggggtt ggagaagagt ttgacgagga tgagctcatg
 540
 gcggaattag aagaactaga acaggaggaa ctagacaaga atttgctgga aatcagtgga
 600
 cccgaaacag tccctctacc aaatgttccc tctatagccc taccatcaaa acccgccaag
 660
 aagaaagaag aggaggacga cgacatgaag gaattggaga actgggctgg atccatgtaa
 720
 tgggggtccag cgctggctgg gccagacag actgtggtgg cctgcgcagc gagcaggcgt
 780
 gtgcgtgtgt ggggcaggca ggatgtggtg caggcaggtt ccatcgcttt cgactctcac
 840
 tccaaagcag tagggccgcg ttgctgctca ctctctgcat agcatggtct gcacctggga
 900
 gttggccggg gggagggggg cgagcgggct ggcacgtgcc tgctgtttat aatgttgaat
 960
 ttctgtaaaa taaactgtat ttgcaaatcc aaaaaaaaaa aaaa
 1004

<210> 6166

<211> 239

<212> PRT

<213> Homo sapiens

<400> 6166

Pro	Ser	Arg	Ile	Gly	Arg	Arg	Arg	Pro	Ala	Arg	Arg	Ala	Ala	Thr	Met
1			5					10				15			
Ser	Val	Phe	Gly	Lys	Leu	Phe	Gly	Ala	Gly	Gly	Gly	Lys	Ala	Gly	Lys
			20					25				30			
Gly	Gly	Pro	Thr	Pro	Gln	Glu	Ala	Ile	Gln	Arg	Leu	Arg	Asp	Thr	Glu
		35				40					45				
Glu	Met	Leu	Ser	Lys	Lys	Gln	Glu	Phe	Leu	Glu	Lys	Lys	Ile	Glu	Gln
	50				55				60						
Glu	Leu	Thr	Ala	Ala	Lys	Lys	His	Gly	Thr	Lys	Asn	Lys	Arg	Ala	Ala
65				70				75				80			
Leu	Gln	Ala	Leu	Lys	Arg	Lys	Lys	Arg	Tyr	Glu	Lys	Gln	Leu	Ala	Gln
			85					90				95			
Ile	Asp	Gly	Thr	Leu	Ser	Thr	Ile	Glu	Phe	Gln	Arg	Glu	Ala	Leu	Glu
			100					105				110			
Asn	Ala	Asn	Thr	Asn	Thr	Glu	Val	Leu	Lys	Asn	Met	Gly	Tyr	Ala	Ala
	115					120						125			
Lys	Ala	Met	Lys	Ala	Ala	His	Asp	Asn	Met	Asp	Ile	Asp	Lys	Val	Asp
	130				135						140				
Glu	Leu	Met	Gln	Asp	Ile	Ala	Asp	Gln	Gln	Glu	Leu	Ala	Glu	Glu	Ile
145				150				155				160			
Ser	Thr	Ala	Ile	Ser	Lys	Pro	Val	Gly	Phe	Gly	Glu	Glu	Phe	Asp	Glu
			165					170				175			
Asp	Glu	Leu	Met	Ala	Glu	Leu	Glu	Glu	Leu	Glu	Gln	Glu	Glu	Leu	Asp
		180				185					190				
Lys	Asn	Leu	Leu	Glu	Ile	Ser	Gly	Pro	Glu	Thr	Val	Pro	Leu	Pro	Asn
	195					200					205				
Val	Pro	Ser	Ile	Ala	Leu	Pro	Ser	Lys	Pro	Ala	Lys	Lys	Lys	Glu	Glu
	210				215						220				
Glu	Asp	Asp	Asp	Met	Lys	Glu	Leu	Glu	Asn	Trp	Ala	Gly	Ser	Met	

225

230

235

<210> 6167

<211> 1220

<212> DNA

<213> Homo sapiens

<400> 6167

ngccatacag catttttagtt ttgtttcttc cattaactga agtcacgagg tatgcctcct
60
tggaaactcc aacagttaag agattctcat gtattccatg aaataaaaag caaagaaaaa
120
tcaaacttgt cttaatgaga tggaaagtgt ggatcaaaca ctgattgagc tgttctatgt
180
cctccacttc cccagtgcct tctctctctc cgggtctgcg cggacgcggc ctccttacct
240
catttgtcct cgccccctcc cgtccctcta cgcgttttgg tccctgtttg gtgctttctg
300
tttgacgcta cggcagtgag tatgtatgtg acggaccccg agtcacccgc ggcctgggac
360
ccctgcctac cctcgtctc gccagccgag ctgtggaact agcgcgtgcc ccctcgcga
420
cctcggcgct tccggtccgc cctcacttg tgggtgggag cagctcctgg tccctcagct
480
gcgcgcgcgc ccaacgcggc gggctgcggg tctaggggt cgcacatctc ctggctttcc
540
aagggctaag gtcgtgatc tagggcggc gggcgccag ggcctcggg ggggtggcgt
600
gtctgccctt tttatctccc cgcaaggccc ccagtcttct agggagcca gtcagtgaag
660
cgcgagggtc cgggcgcgcc gagagagagt ccagtctttg aggaccgagt agtcctgggc
720
cacctcccgc ctctgctgta agaagcagca gctgcgcgcg tggaatccaa aatttcggga
780
gctgtgacct ttctctcatg taaaacgagt agtcttgac gatctgggca taggaacca
840
tcagaaacaa tcgcttcagc aatcaagacc attgttcac atggaggaac ccatggatac
900
ctctgagcct ctatctgcat taccattcac tgggcagcag tcttttgagc caagtggcaa
960
atttggacag tatccatcga tgcagatgaa ccacatccag gcactgggga agtggaggac
1020
atagaacagc tcaatcagtg ttgatccaa cacttccatc tcattaagac aagtttgatt
1080
tttctttgct ttttatttca tgggaatacat gagaatctct taactgttgg agtttccaag
1140
gaggcatacc tcatgacttc agttaatgga aagaacaaaa ctaaaatgct gtatggccaa
1200
agccacaaag ggaaggatcc
1220

<210> 6168

<211> 90

<212> PRT

<213> Homo sapiens

<400> 6168

```

Ala Lys Trp Gln Ile Trp Thr Val Ser Ile Asp Ala Asp Glu Pro His
 1           5           10           15
Pro Gly Thr Gly Glu Val Glu Asp Ile Glu Gln Leu Asn Gln Cys Leu
           20           25           30
Ile Gln His Phe His Leu Ile Lys Thr Ser Leu Ile Phe Leu Cys Phe
           35           40           45
Leu Phe His Gly Ile His Glu Asn Leu Leu Thr Val Gly Val Ser Lys
           50           55           60
Glu Ala Tyr Leu Met Thr Ser Val Asn Gly Lys Asn Lys Thr Lys Met
65           70           75           80
Leu Tyr Gly Gln Ser His Lys Gly Lys Asp
           85           90

```

<210> 6169

<211> 720

<212> DNA

<213> Homo sapiens

<400> 6169

```

tgagggcttc gatcccttct ctgatttgct gtcagccatg aacggatgga tgtgatgcct
60
gctagccaaa aggcttcctt ctgtgtgttg cagtcctgtg gcattatgca tgccccctcc
120
cagtgaacccc aggcttttta tggctgtgaa acacgttaaa atttcagggt aagacgtgac
180
cttttgaggt gactataact gaagattgct ttacagaagc ccaaaaaggt tttttgagtc
240
atgatgcaag aatctgggac tgagacaaaa agtaacgggt cagccatcca gaatgggtcg
300
ggcggcagca accacttact agagtgcggc ggtcttcggg aggggagggt caacggagag
360
acgccggccg tggacatcgg ggcagctgac ctgcgccacg cccagcagca gcagcaacag
420
tggcatctca taaaccatca gccctctagg agtcccagca gttggcttaa gagactaatt
480
tcaagccctt gggagttgga agtctgcag gtcccttggt gggagcagtt gctgagacga
540
agatgagtg acctgtgtgt cagcctaacc cttccccatt ttgaataaaa ttattctttg
600
gagaaatggt tccactgct ttcagtcaaa aataaaaatt aaacgaaaaa cagcttaagc
660
ctgtgaagaa ggaaatactg agctagccag caaaagagag aaagaagagg aggggagagg
720

```

<210> 6170

<211> 101

<212> PRT

<213> Homo sapiens

<400> 6170

```

Met Met Gln Glu Ser Gly Thr Glu Thr Lys Ser Asn Gly Ser Ala Ile

```

```

      1           5           10           15
Gln Asn Gly Ser Gly Gly Ser Asn His Leu Leu Glu Cys Gly Gly Leu
      20           25           30
Arg Glu Gly Arg Ser Asn Gly Glu Thr Pro Ala Val Asp Ile Gly Ala
      35           40           45
Ala Asp Leu Ala His Ala Gln Gln Gln Gln Gln Trp His Leu Ile
      50           55           60
Asn His Gln Pro Ser Arg Ser Pro Ser Ser Trp Leu Lys Arg Leu Ile
      65           70           75           80
Ser Ser Pro Trp Glu Leu Glu Val Leu Gln Val Pro Cys Gly Glu Gln
      85           90           95
Leu Leu Arg Arg Arg
      100

```

<210> 6171

<211> 1130

<212> DNA

<213> Homo sapiens

<400> 6171

```

nncccgctag gagttcctag taaagtggcg ggagccgcag ctatggagcc gcaggaggag
60
agagaaacgc aggttctgtc gtggttaaaa aaaatatattg gagatcatcc tattccacag
120
tatgaggtga acccacggac cacagagatt ttacatcacc tttcagaacg caacagggtc
180
cgggacaggg atgtctacct ggtaatagag gacttgaagc agaaagcaag tgaatacgag
240
tcagaagcca agtatcttca agaccttctc atggagagtg tgaatttttc ccccgccaat
300
ctctctagca ctggttccag gtatctgaat gctttggttg acagtgcggt ggcccttgaa
360
acaaaggata cctcgctagc tagttttatc cctgcagtga atgatttgac ctctgatctc
420
tttcgtacca aatccaaaag tgaagaaatc aagattgaac tggaaaaact tgaaaaaaat
480
ttaactgcaa ctttagtatt agaaaaatgt ctacaagagg atgtcaagaa agcagagttg
540
catctgtcta cagaaagggc caaagttgat aatcgtcgtc agaacatgga ctttctaaaa
600
gcaaagtcag aggaattcag atttggaatc aaggctgcag aggagcaact ttcagccaga
660
ggcatggatg cttctctgtc tcatcagtc ttagtagcac tatcagagaa actggcaaga
720
ttaaagcaac agactatacc tttgaagaaa aaattggagt cctattttaga cttaatgccg
780
aatccgtctc ttgctcaagt gaaaattgaa gaagcaaagc gagaactaga tagcattgaa
840
gctgaactta caagaagagt agacatgatg gaactgtgac aaaagccaaa taaacatcct
900
tttccctaac aaagtaaatt gaataggact ttacagagtt ctttttctc ttggcatttc
960
ctaataacaa aactttctgt gttcttagat tacagaatat cataattgat agaatatggt
1020

```

ttcttactgt gtgttgcat tttgtgccca aatacatagt tttcatatta aaaagccttt
1080

tctcttataaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa

1130

<210> 6172

<211> 292

<212> PRT

<213> Homo sapiens

<400> 6172

Xaa Pro Leu Gly Val Pro Ser Lys Val Ala Gly Ala Ala Ala Met Glu
1 5 10 15
Pro Gln Glu Glu Arg Glu Thr Gln Val Ala Ala Trp Leu Lys Lys Ile
20 25 30
Phe Gly Asp His Pro Ile Pro Gln Tyr Glu Val Asn Pro Arg Thr Thr
35 40 45
Glu Ile Leu His His Leu Ser Glu Arg Asn Arg Val Arg Asp Arg Asp
50 55 60
Val Tyr Leu Val Ile Glu Asp Leu Lys Gln Lys Ala Ser Glu Tyr Glu
65 70 75 80
Ser Glu Ala Lys Tyr Leu Gln Asp Leu Leu Met Glu Ser Val Asn Phe
85 90 95
Ser Pro Ala Asn Leu Ser Ser Thr Gly Ser Arg Tyr Leu Asn Ala Leu
100 105 110
Val Asp Ser Ala Val Ala Leu Glu Thr Lys Asp Thr Ser Leu Ala Ser
115 120 125
Phe Ile Pro Ala Val Asn Asp Leu Thr Ser Asp Leu Phe Arg Thr Lys
130 135 140
Ser Lys Ser Glu Glu Ile Lys Ile Glu Leu Glu Lys Leu Glu Lys Asn
145 150 155 160
Leu Thr Ala Thr Leu Val Leu Glu Lys Cys Leu Gln Glu Asp Val Lys
165 170 175
Lys Ala Glu Leu His Leu Ser Thr Glu Arg Ala Lys Val Asp Asn Arg
180 185 190
Arg Gln Asn Met Asp Phe Leu Lys Ala Lys Ser Glu Glu Phe Arg Phe
195 200 205
Gly Ile Lys Ala Ala Glu Glu Gln Leu Ser Ala Arg Gly Met Asp Ala
210 215 220
Ser Leu Ser His Gln Ser Leu Val Ala Leu Ser Glu Lys Leu Ala Arg
225 230 235 240
Leu Lys Gln Gln Thr Ile Pro Leu Lys Lys Lys Leu Glu Ser Tyr Leu
245 250 255
Asp Leu Met Pro Asn Pro Ser Leu Ala Gln Val Lys Ile Glu Glu Ala
260 265 270
Lys Arg Glu Leu Asp Ser Ile Glu Ala Glu Leu Thr Arg Arg Val Asp
275 280 285
Met Met Glu Leu
290

<210> 6173

<211> 1483

<212> DNA

<213> Homo sapiens

<400> 6173

agagagagag actagttctc tcttactcta ggcccttcgg tttgcgcgac ggggcaggaa
60
agcgtgcgtg cggctaagag agtgggcgct ctcgcggcgc tgacgatgga agaactggag
120
caaggcctgt tgatgcagcc atgggcggtg ctacagcttg cagagaactc cctcttgccc
180
aaggttttta tcaccaagca gggctatgcc ttgttggttt cagatcttca acaggtgtgg
240
catgaacagg tggacactag tgtggtcagc cagcgagcca aggagctgaa caagcggctc
300
actgctctc ctgcagcttt cctctgtcat ttggataatc tccttcgccc attgttgaag
360
gacgtgctc accctagcga agctacctc tcctgtgatt gtgtggcaga tgcactgatt
420
ctacgggtgc gaagtgcgt ctctggcctc ccttctatt ggaattcca ctgcatgcta
480
gctagtcctt ccttggctc ccaacatttg attcgtctc tgatgggcat gagtctggca
540
ttacagtgcc aagtgcagga gctagcaacg ttacttcata tgaaagacct agagatccaa
600
gactaccagg agagtggggc tacgtgatt cgagatcgat tgaagacaga accatttgaa
660
gaaaaattcct tcttgaaca atttatgata gagaaactgc cagaggcatg cagcattggt
720
gatggaaagc cctttgtcat gaatctgcag gatctgtata tggcagtcac cacacaagag
780
gtccaagtgg gacagaagca tcaaggcgct ggagatcctc atacctcaa cagtgccttc
840
ctgcaaggaa tcgatagcca atgtgtaaac cagccagaac aactggctc ctacgcccc
900
accctctcag cacctgagaa agagtccacg ggtacttcag gccctctgca gagacctcag
960
ctgtcaaagg tcaagaggaa gaatccaagg ggtctcttca gttaatctgt tgtggcctca
1020
gctgctgagg atggacttgg agaatagctt ccaagcttca ccttgaaaga agcttacatg
1080
gcagcaatat ttctaaaata gtgatacagt cagaggcctc ctgtaagggc gagagaactg
1140
aagttgatgt tgacaggccc acagggaatt ggccctccct gttcaagtgg aagccagtct
1200
ctgagaatcc cgtgctctcc tctcttttgg tggaggttct gtaggttcag gtttctacca
1260
tggacttttag gtatataggg caagtcagca agaaagcacc acacactcag gaagccttgt
1320
ctacctttcc ctacgctctc tagccagcca gcccagata ctctcagag acccacttct
1380
ctcttttgca tggataaaaa agcactcaca gtccctgctt ttgggattaa aaaacaaaaa
1440
gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa cctcatgccg aat
1483

<210> 6174

<211> 299
 <212> PRT
 <213> Homo sapiens

<400> 6174
 Met Glu Glu Leu Glu Gln Gly Leu Leu Met Gln Pro Trp Ala Trp Leu
 1 5 10 15
 Gln Leu Ala Glu Asn Ser Leu Leu Ala Lys Val Phe Ile Thr Lys Gln
 20 25 30
 Gly Tyr Ala Leu Leu Val Ser Asp Leu Gln Gln Val Trp His Glu Gln
 35 40 45
 Val Asp Thr Ser Val Val Ser Gln Arg Ala Lys Glu Leu Asn Lys Arg
 50 55 60
 Leu Thr Ala Pro Pro Ala Ala Phe Leu Cys His Leu Asp Asn Leu Leu
 65 70 75 80
 Arg Pro Leu Leu Lys Asp Ala Ala His Pro Ser Glu Ala Thr Phe Ser
 85 90 95
 Cys Asp Cys Val Ala Asp Ala Leu Ile Leu Arg Val Arg Ser Glu Leu
 100 105 110
 Ser Gly Leu Pro Phe Tyr Trp Asn Phe His Cys Met Leu Ala Ser Pro
 115 120 125
 Ser Leu Val Ser Gln His Leu Ile Arg Pro Leu Met Gly Met Ser Leu
 130 135 140
 Ala Leu Gln Cys Gln Val Arg Glu Leu Ala Thr Leu Leu His Met Lys
 145 150 155 160
 Asp Leu Glu Ile Gln Asp Tyr Gln Glu Ser Gly Ala Thr Leu Ile Arg
 165 170 175
 Asp Arg Leu Lys Thr Glu Pro Phe Glu Glu Asn Ser Phe Leu Glu Gln
 180 185 190
 Phe Met Ile Glu Lys Leu Pro Glu Ala Cys Ser Ile Gly Asp Gly Lys
 195 200 205
 Pro Phe Val Met Asn Leu Gln Asp Leu Tyr Met Ala Val Thr Thr Gln
 210 215 220
 Glu Val Gln Val Gly Gln Lys His Gln Gly Ala Gly Asp Pro His Thr
 225 230 235 240
 Ser Asn Ser Ala Ser Leu Gln Gly Ile Asp Ser Gln Cys Val Asn Gln
 245 250 255
 Pro Glu Gln Leu Val Ser Ser Ala Pro Thr Leu Ser Ala Pro Glu Lys
 260 265 270
 Glu Ser Thr Gly Thr Ser Gly Pro Leu Gln Arg Pro Gln Leu Ser Lys
 275 280 285
 Val Lys Arg Lys Asn Pro Arg Gly Leu Phe Ser
 290 295

<210> 6175
 <211> 349
 <212> DNA
 <213> Homo sapiens

<400> 6175
 acgcgttttc cgggagatgc ggccgcttcg tcctctgcag ttaagaagct gggcgctcgc
 60
 aggaactggga tttaaatat gcgtgcatta gagaatgact ttttcaattc tcccccaaga
 120

aaaactgttc agtttggtgg aactgtgaca gaagtcttgc tgaagtacaa aaagggtgaa
 180
 acaaagtact ttgagttggt gaagaaccag ctgttagatc cagacataaa gagattgcct
 240
 tggttgaata gaagtcaaac agtagtgga gagtatttgg cttttcttgg taatcttgta
 300
 tcagcacaga ctgttttctc cagaccgtgt ctcagcatga ttgcttccc
 349

<210> 6176
 <211> 90
 <212> PRT
 <213> Homo sapiens

<400> 6176
 Met Arg Ala Leu Glu Asn Asp Phe Phe Asn Ser Pro Pro Arg Lys Thr
 1 5 10 15
 Val Gln Phe Gly Gly Thr Val Thr Glu Val Leu Leu Lys Tyr Lys Lys
 20 25 30
 Gly Glu Thr Asn Asp Phe Glu Leu Leu Lys Asn Gln Leu Leu Asp Pro
 35 40 45
 Asp Ile Lys Arg Leu Pro Trp Leu Asn Arg Ser Gln Thr Val Val Glu
 50 55 60
 Glu Tyr Leu Ala Phe Leu Gly Asn Leu Val Ser Ala Gln Thr Val Phe
 65 70 75 80
 Leu Arg Pro Cys Leu Ser Met Ile Ala Ser
 85 90

<210> 6177
 <211> 1536
 <212> DNA
 <213> Homo sapiens

<400> 6177
 cggcccaacc atggcgctct ccgcggccgg ctgcgtggtg atcgttggca gaattaaaac
 60
 tctgtacca ttgaacaaca gctgctcatt tccccagcc ccagcccctg gcatccaccc
 120
 ttctagcttt ctgtctctat gggtagctca gtggagtcac tgggcgaatg ggccatgctg
 180
 tttgccagt gaggtctcca ggtgaaactc tatgacattg agcaacagca gataaggaac
 240
 gccctggaaa acatcagaaa ggagatgaag ttgctggagc aggcagggtc tctgaaaggc
 300
 tccctgagtg tggaagagca gctgtcactc atcagtgggt gtcccaatat ccaagaagca
 360
 gtagaggggt ccattgcacat tcaggaatgt gttccagaag atctagaact gaagaagaag
 420
 atttttgtc agttagattc catcattgat gatcgagtga tcttaagcag ttccacttct
 480
 tgtctcatgc cttccaagtt gtttgctggc ttggtccatg tgaagcaatg catcgtggct
 540
 catcctgtga atccgccata ctacatcccg ctggttgagc tgggtcccca cccggagacg
 600

gccctacga cagtggacag aaccacgcc ctgatgaaga agattgganc agtgcccat
 660
 gcgagtcacag aaggaggtgg ccggcttcgt tctgaaccgc ctgcaatatg caatcatcag
 720
 cgaggcctgg cggctagtgg aggaaggaat ncgtgtctcc tagtgacctg gnaccttgctc
 780
 atgtcagaag ggttgggcat gcggtatgca ttcattggac ccoctggaaac catgcatctc
 840
 aatgcagaag gtatgttaag ctactgcgac agatacagcg aaggcataaa acatgtccta
 900
 cagacttttg gaccattcc agagttttcc agggccactg ctgagaaggt taaccaggac
 960
 atgtgcatga aggtccctga tgaccggag cacttagctg ccaggaggca gtggagggac
 1020
 gagtgcctca tgagactcgc caagttgaag agtcaagtgc agccccagtg aatttcttgt
 1080
 aatgcagctt ccactcctct cattggaggc cctatttggg aacactgcaa gcccttaatc
 1140
 agccctctgt gacataggta gcagcccacg gagatcctaa gctggctgtc ttgtgtgcag
 1200
 cctgagtggg gtggtgcagg ccggtagtct gcccgctact ttggatcata gccctgggcc
 1260
 tggcggcaca gcagcacttg cgttctcggg gctgtcgatt tcttgccacc tgggcagata
 1320
 acctggagat ttccaccttt tcttttcagc ttgattgcat ttgactatat ttacagcca
 1380
 gtgattgtag tttcatgtta atatgtggca aaatattttt gtaattattt tctaaccct
 1440
 ttctgagtac tctggggccc tgcatttatg aggcacctac cttcattttg ctaacgctta
 1500
 ttctgaataa aagtttttga ttccttaaaa aaaaaa
 1536

<210> 6178

<211> 310

<212> PRT

<213> Homo sapiens

<400> 6178

Met	Gly	Thr	Ser	Val	Glu	Ser	Leu	Gly	Glu	Trp	Ala	Met	Leu	Phe	Ala
1				5					10					15	
Ser	Gly	Gly	Phe	Gln	Val	Lys	Leu	Tyr	Asp	Ile	Glu	Gln	Gln	Gln	Ile
			20					25					30		
Arg	Asn	Ala	Leu	Glu	Asn	Ile	Arg	Lys	Glu	Met	Lys	Leu	Leu	Glu	Gln
			35				40					45			
Ala	Gly	Ser	Leu	Lys	Gly	Ser	Leu	Ser	Val	Glu	Glu	Gln	Leu	Ser	Leu
			50			55				60					
Ile	Ser	Gly	Cys	Pro	Asn	Ile	Gln	Glu	Ala	Val	Glu	Gly	Ala	Met	His
65				70				75						80	
Ile	Gln	Glu	Cys	Val	Pro	Glu	Asp	Leu	Glu	Leu	Lys	Lys	Lys	Ile	Phe
			85					90						95	
Ala	Gln	Leu	Asp	Ser	Ile	Ile	Asp	Asp	Arg	Val	Ile	Leu	Ser	Ser	Ser
			100					105					110		
Thr	Ser	Cys	Leu	Met	Pro	Ser	Lys	Leu	Phe	Ala	Gly	Leu	Val	His	Val


```

      115              120              125
Lys Gln Cys Ile Val Ala His Pro Val Asn Pro Pro Tyr Tyr Ile Pro
      130              135              140
Leu Val Glu Leu Val Pro His Pro Glu Thr Ala Pro Thr Thr Val Asp
145              150              155              160
Arg Thr His Ala Leu Met Lys Lys Ile Gly Xaa Val Pro His Ala Ser
      165              170              175
Pro Glu Gly Gly Gly Arg Leu Arg Ser Glu Pro Pro Ala Ile Cys Asn
      180              185              190
His Gln Arg Gly Leu Ala Ala Ser Gly Gly Arg Asn Xaa Cys Leu Leu
      195              200              205
Val Thr Trp Xaa Leu Val Met Ser Glu Gly Leu Gly Met Arg Tyr Ala
      210              215              220
Phe Ile Gly Pro Leu Glu Thr Met His Leu Asn Ala Glu Gly Met Leu
225              230              235              240
Ser Tyr Cys Asp Arg Tyr Ser Glu Gly Ile Lys His Val Leu Gln Thr
      245              250              255
Phe Gly Pro Ile Pro Glu Phe Ser Arg Ala Thr Ala Glu Lys Val Asn
      260              265              270
Gln Asp Met Cys Met Lys Val Pro Asp Asp Pro Glu His Leu Ala Ala
      275              280              285
Arg Arg Gln Trp Arg Asp Glu Cys Leu Met Arg Leu Ala Lys Leu Lys
      290              295              300
Ser Gln Val Gln Pro Gln
305              310

```

<210> 6179

<211> 2940

<212> DNA

<213> Homo sapiens

<400> 6179

```

nnctgcaggt ggcgcggggag gctacgcgcg gggcggggtgc tgcttgcctgc aggcctctggg
60
gagtcgccat gcctacaaca cagcagtcgcc ctcaggatga gcaggaaaag ctcttgggatg
120
aagccatata ggctgtgaag gtccagtcac tccaaatgaa gagatgcctg gacaaaaaca
180
agcttatgga tgctctaaaa catgcttcta atatgcttgg tgaactccgg acttctatgt
240
tatcaccaaa gagttactat gaactttata tggccatttc tgatgaactg cactacttgg
300
aggntctacc tgacagatga gtttgctaaa ggaaggaaaag tggcagatct ctacgaactt
360
gtacagtatg ctggaaacat tateccaagg ctttaccttt tgatcacagt tggagttgta
420
tatgtcaagt catttctctc gtccaggaag gatattttga aagatttggg agaaatgtgc
480
cgtgggtgtc aacatccctt gaggggtctg tttcttcgaa attaccttct tcagtgtacc
540
agaaatatct tacctgatga aggagagcca acagatgaag aaacaactgg tgacatcagt
600
gattccatgg atttgtact gctcaacttt gcagaaatga acaagctctg ggtgcgaatg
660

```

cagcatcagg gacatagccg agatagagaa aaaagagaac gagaaagaca agaactgaga
720
attttagtgg gaacaaatth ggtgcgcctc agtnncagtt ggaggtgtaa atgtggaacg
780
ttacaacaga ttgttttgac tggcatattg gagcaagttg taaactgtag ggatgctttg
840
gctcaagaat atctcatgga gtgtattatt caggttttcc ctgatgaatt tcacctccag
900
actttgaatc cttttcttcg ggctgtgct gagttacacc agaattgtaa tgtgaagaac
960
ataatcattg ctttaattga tagattagct ttatttgctc accgtgaaga tggacctgga
1020
atcccagcgg atattaaact ttttgatata ttttcacagc aggtggctac agtgatacag
1080
tctagacaag acatgccttc agaggatgtt gtatctttac aagtctctct gattaatctt
1140
gccatgaaat gttaccctga tcgtgtggac tatgttgata aagtctctaga aacaacagtg
1200
gagatattea ataagctcaa ccttgaacat attgctacca gtagtgcagt tcaaaaggaa
1260
ctcaccagac ttttgaaaat accagttgac acttacaaca atattttaac agtcttgaaa
1320
ttaaaacatt ttcaccact ctttgagtac ttgactacg agtcacagaa gagcatgagt
1380
tgttatgtgc ttagtaatgt tctggattat aacacagaaa ttgtctctca agaccaggtg
1440
gattccataa tgaatttggg atccacgttg attcaagatc agccagatca acctgtagaa
1500
gacctgac cagaagattt tgctgatgag cagagccttg tgggccgctt cattcatctg
1560
ctgcgctctg aggacctga ccagcagtac ttgattttga acacagcacg aaaacattht
1620
ggagctgggtg gaaatcagcg gattcgcttc aactgccac ctttggattt tgcagcttac
1680
cagctggctt ttcgatataa agagaattct aagtggatga caaatgggaa aagaaatgcc
1740
agaagatttt ttcatttgcc cnaccagact atcagtgtt tgatcaaagc agagctggca
1800
gaattgcct taagacttht tcttcaagga gcactagctg ctggggaaat tggttttgaa
1860
aatcatgaga cagtcgcata tgaattcatg tcccaggcat tttctctgta tgaagatgaa
1920
atcagcgatt ccaaagcaca gctagctgcc atcaccttga tcattggcac ttttgaaagg
1980
atgaagtgtc tcagtgaaga gaatcatgaa cctctgagga ctcagtgtgc ccttgctgca
2040
tccaaacttc taaagaaacc tgatcagggc cgagctgagc acctgtgcac atctctttgg
2100
tctggcagaa acacggacaa aaatggggag gagcttcacg gaggcaagag ggtaatggag
2160
tgcttaaaaa aagctctaaa aatagcaaat cagtgcattg accctctctt acaagtgcag
2220
ctttttatag aaattctgaa cagatatatc ttttttatg aaaaggaaaa tgatgcggtg
2280

acaattcagg ttttaaacca gcttatccaa aagattcgag aagacctccc gaattcttgaa
 2340
 tccagtgaag aaacagagca gattaacaaa cattttcata acacactgga gcatttgcgc
 2400
 ttgcggcggg aatcaccaga atccgagggg ccaatttatg aaggctcat cctttaaaaa
 2460
 ggaaatagct caccatactc ctttccatgt acatccagtg agggttttat tacgctaggt
 2520
 ttcccttcca tagattgtgc ctttcagaaa tgetgaggtg ggtttcccat ttcttacctg
 2580
 tgatgtgttt taccagcac ctccggacac tcaccttcag gaccttaata aaattattca
 2640
 cttgtaagt gttcaagtct ttctgatcac cccaagtagc atgactgac tgcaattttt
 2700
 agagcttttt ttaggcactc cattaccctc ttgctccgt gaagctcctc cccatttttg
 2760
 tccgtgtttc tgccagacca gaagagatgt gcacaggtgc tcacagctcg gccctgatca
 2820
 ggtttcttta gaagtttgga tgcagcaagg gcacactgag tcctcagagg ttcattgatc
 2880
 tcttactga agcacttcac cctttcaaaa gtgccaatga tcaaggtgat ggcagctagc
 2940

<210> 6180

<211> 751

<212> PRT

<213> Homo sapiens

<400> 6180

Met	Leu	Leu	Ile	Cys	Leu	Val	Asn	Ser	Gly	Leu	Leu	Cys	Tyr	His	Gln
1				5					10					15	
Arg	Val	Thr	Met	Asn	Phe	Ile	Trp	Pro	Phe	Leu	Met	Asn	Cys	Thr	Thr
				20				25					30		
Trp	Arg	Xaa	Tyr	Leu	Thr	Asp	Glu	Phe	Ala	Lys	Gly	Arg	Lys	Val	Ala
		35				40						45			
Asp	Leu	Tyr	Glu	Leu	Val	Gln	Tyr	Ala	Gly	Asn	Ile	Ile	Pro	Arg	Leu
	50				55						60				
Tyr	Leu	Leu	Ile	Thr	Val	Gly	Val	Val	Tyr	Val	Lys	Ser	Phe	Pro	Gln
65				70					75					80	
Ser	Arg	Lys	Asp	Ile	Leu	Lys	Asp	Leu	Val	Glu	Met	Cys	Arg	Gly	Val
			85					90					95		
Gln	His	Pro	Leu	Arg	Gly	Leu	Phe	Leu	Arg	Asn	Tyr	Leu	Leu	Gln	Cys
			100					105					110		
Thr	Arg	Asn	Ile	Leu	Pro	Asp	Glu	Gly	Glu	Pro	Thr	Asp	Glu	Glu	Thr
		115				120					125				
Thr	Gly	Asp	Ile	Ser	Asp	Ser	Met	Asp	Phe	Val	Leu	Leu	Asn	Phe	Ala
	130				135						140				
Glu	Met	Asn	Lys	Leu	Trp	Val	Arg	Met	Gln	His	Gln	Gly	His	Ser	Arg
145			150						155					160	
Asp	Arg	Glu	Lys	Arg	Glu	Arg	Glu	Arg	Gln	Glu	Leu	Arg	Ile	Leu	Val
			165					170					175		
Gly	Thr	Asn	Leu	Val	Arg	Leu	Ser	Xaa	Ser	Trp	Arg	Cys	Lys	Cys	Gly
		180					185					190			
Thr	Leu	Gln	Gln	Ile	Val	Leu	Thr	Gly	Ile	Leu	Glu	Gln	Val	Val	Asn

```

      195              200              205
Cys Arg Asp Ala Leu Ala Gln Glu Tyr Leu Met Glu Cys Ile Ile Gln
 210              215              220
Val Phe Pro Asp Glu Phe His Leu Gln Thr Leu Asn Pro Phe Leu Arg
 225              230              235              240
Ala Cys Ala Glu Leu His Gln Asn Val Asn Val Lys Asn Ile Ile Ile
      245              250              255
Ala Leu Ile Asp Arg Leu Ala Leu Phe Ala His Arg Glu Asp Gly Pro
 260              265              270
Gly Ile Pro Ala Asp Ile Lys Leu Phe Asp Ile Phe Ser Gln Gln Val
 275              280              285
Ala Thr Val Ile Gln Ser Arg Gln Asp Met Pro Ser Glu Asp Val Val
 290              295              300
Ser Leu Gln Val Ser Leu Ile Asn Leu Ala Met Lys Cys Tyr Pro Asp
 305              310              315              320
Arg Val Asp Tyr Val Asp Lys Val Leu Glu Thr Thr Val Glu Ile Phe
      325              330              335
Asn Lys Leu Asn Leu Glu His Ile Ala Thr Ser Ser Ala Val Ser Lys
      340              345              350
Glu Leu Thr Arg Leu Leu Lys Ile Pro Val Asp Thr Tyr Asn Asn Ile
 355              360              365
Leu Thr Val Leu Lys Leu Lys His Phe His Pro Leu Phe Glu Tyr Phe
 370              375              380
Asp Tyr Glu Ser Arg Lys Ser Met Ser Cys Tyr Val Leu Ser Asn Val
 385              390              395              400
Leu Asp Tyr Asn Thr Glu Ile Val Ser Gln Asp Gln Val Asp Ser Ile
      405              410              415
Met Asn Leu Val Ser Thr Leu Ile Gln Asp Gln Pro Asp Gln Pro Val
      420              425              430
Glu Asp Pro Asp Pro Glu Asp Phe Ala Asp Glu Gln Ser Leu Val Gly
      435              440              445
Arg Phe Ile His Leu Leu Arg Ser Glu Asp Pro Asp Gln Gln Tyr Leu
 450              455              460
Ile Leu Asn Thr Ala Arg Lys His Phe Gly Ala Gly Gly Asn Gln Arg
 465              470              475              480
Ile Arg Phe Thr Leu Pro Pro Leu Val Phe Ala Ala Tyr Gln Leu Ala
      485              490              495
Phe Arg Tyr Lys Glu Asn Ser Lys Trp Met Thr Asn Gly Lys Arg Asn
 500              505              510
Ala Arg Arg Phe Phe His Leu Pro Xaa Gln Thr Ile Ser Ala Leu Ile
 515              520              525
Lys Ala Glu Leu Ala Glu Leu Pro Leu Arg Leu Phe Leu Gln Gly Ala
 530              535              540
Leu Ala Ala Gly Glu Ile Gly Phe Glu Asn His Glu Thr Val Ala Tyr
 545              550              555              560
Glu Phe Met Ser Gln Ala Phe Ser Leu Tyr Glu Asp Glu Ile Ser Asp
      565              570              575
Ser Lys Ala Gln Leu Ala Ala Ile Thr Leu Ile Ile Gly Thr Phe Glu
      580              585              590
Arg Met Lys Cys Phe Ser Glu Glu Asn His Glu Pro Leu Arg Thr Gln
 595              600              605
Cys Ala Leu Ala Ala Ser Lys Leu Leu Lys Lys Pro Asp Gln Gly Arg
 610              615              620
Ala Glu His Leu Cys Thr Ser Leu Trp Ser Gly Arg Asn Thr Asp Lys

```

```

625          630          635          640
Asn Gly Glu Glu Leu His Gly Gly Lys Arg Val Met Glu Cys Leu Lys
          645          650          655
Lys Ala Leu Lys Ile Ala Asn Gln Cys Met Asp Pro Ser Leu Gln Val
          660          665          670
Gln Leu Phe Ile Glu Ile Leu Asn Arg Tyr Ile Tyr Phe Tyr Glu Lys
          675          680          685
Glu Asn Asp Ala Val Thr Ile Gln Val Leu Asn Gln Leu Ile Gln Lys
          690          695          700
Ile Arg Glu Asp Leu Pro Asn Leu Glu Ser Ser Glu Glu Thr Glu Gln
705          710          715          720
Ile Asn Lys His Phe His Asn Thr Leu Glu His Leu Arg Leu Arg Arg
          725          730          735
Glu Ser Pro Glu Ser Glu Gly Pro Ile Tyr Glu Gly Leu Ile Leu
          740          745          750

```

<210> 6181
 <211> 1135
 <212> DNA
 <213> Homo sapiens

```

<400> 6181
gccaaagcgct actcctgggtc cggcatgggc cgcattccaca agggcatccg cgagcagggc
60
cgggtacctca acagccggcc ctccatccag aagcccagagg tcttcttctt gcccagacctg
120
cccaccacgc cctatttctc cggggacgca cagaaacatg atgtggaagt gctggaacgg
180
aacttccaga ccactctgtg tgagtttgag accctctaca aagctttctc aaactgcagc
240
ctcccgaag gatggaat gaacagcacc ccagcgggg agtggttcac cttttacttg
300
gtcaatcagg gggtttgtgt tcccaggaac ttaggaagt gccacggac gtaccgcttg
360
ctcggaagcc ttcggacctg tattgggaac aatgtttttg ggaacgcgtg catctctgtg
420
ctgagccctg ggactgtgat aacggagcac tatggacca ccaacatccg catccgatgc
480
catttaggtc tgaaaactcc aaatggctgt gagctggtgg tggggggaga gcccagtg
540
tgggcagaag ggcgtgcct tctctttgat gactctttcc tgcattgtgc gttccatgaa
600
ggttcagcag aggatggccc acgggtggtt ttcattgttg atttgtggca tccaaacgtc
660
gcagcggcgg aacggcaggc tcttgatttc atctttgtc cgggacgatg agagtatttc
720
ccatgctgga gtcggcgaga agggccgagg cggggcctgg gcagactgtg gtccggtcca
780
gtccctaccg gtgtgtttc catgctcaga aacctgcctc agcggaaagc tcttatttgg
840
gattttatat catgtcgggt cctcttttcc cttggttatt gtaaatggaa acttttcggc
900
ttgtatttcc ttagattttt ttttttctt tccaatcatt tgcctcagag actcctttct
960

```

ggcctaacag cgcattcctt tgattggtcc ttgagtgaac agagacttag tgcccttgta
 1020
 agtctgtctt ctgttgctac ttgttttttt cagtgtcttg aaatagagta actaaatggt
 1080
 tatttgtctg aatataataa tgtaaaactt cttgtggtca tcttaaaaaa aaaaa
 1135

<210> 6182

<211> 236

<212> PRT

<213> Homo sapiens

<400> 6182

Ala	Lys	Arg	Tyr	Ser	Trp	Ser	Gly	Met	Gly	Arg	Ile	His	Lys	Gly	Ile
1				5					10					15	
Arg	Glu	Gln	Gly	Arg	Tyr	Leu	Asn	Ser	Arg	Pro	Ser	Ile	Gln	Lys	Pro
			20					25					30		
Glu	Val	Phe	Phe	Leu	Pro	Asp	Leu	Pro	Thr	Thr	Pro	Tyr	Phe	Ser	Arg
		35				40						45			
Asp	Ala	Gln	Lys	His	Asp	Val	Glu	Val	Leu	Glu	Arg	Asn	Phe	Gln	Thr
	50				55						60				
Ile	Leu	Cys	Glu	Phe	Glu	Thr	Leu	Tyr	Lys	Ala	Phe	Ser	Asn	Cys	Ser
65					70				75					80	
Leu	Pro	Gln	Gly	Trp	Lys	Met	Asn	Ser	Thr	Pro	Ser	Gly	Glu	Trp	Phe
			85					90					95		
Thr	Phe	Tyr	Leu	Val	Asn	Gln	Gly	Val	Cys	Val	Pro	Arg	Asn	Cys	Arg
			100				105						110		
Lys	Cys	Pro	Arg	Thr	Tyr	Arg	Leu	Leu	Gly	Ser	Leu	Arg	Thr	Cys	Ile
		115					120					125			
Gly	Asn	Asn	Val	Phe	Gly	Asn	Ala	Cys	Ile	Ser	Val	Leu	Ser	Pro	Gly
		130			135					140					
Thr	Val	Ile	Thr	Glu	His	Tyr	Gly	Pro	Thr	Asn	Ile	Arg	Ile	Arg	Cys
145					150					155				160	
His	Leu	Gly	Leu	Lys	Thr	Pro	Asn	Gly	Cys	Glu	Leu	Val	Val	Gly	Gly
			165					170						175	
Glu	Pro	Gln	Cys	Trp	Ala	Glu	Gly	Arg	Cys	Leu	Leu	Phe	Asp	Asp	Ser
			180				185						190		
Phe	Leu	His	Ala	Ala	Phe	His	Glu	Gly	Ser	Ala	Glu	Asp	Gly	Pro	Arg
		195					200					205			
Val	Val	Phe	Met	Val	Asp	Leu	Trp	His	Pro	Asn	Val	Ala	Ala	Ala	Glu
	210					215					220				
Arg	Gln	Ala	Leu	Asp	Phe	Ile	Phe	Ala	Pro	Gly	Arg				
225					230					235					

<210> 6183

<211> 2530

<212> DNA

<213> Homo sapiens

<400> 6183

acgcgtcggg cggtggggcg ttgagcaagt gcgaccccg agtcatttgg gctgggggtg
 60
 gaggattagc atctgccatt gactcgcatt aaagggccca gcgtctcgcg tgagaggttg
 120

aggttgtgtt gcgggggtcg ggtagctgta ggtcttagaa atggcatcaa aggtggcctt
180
ggcgaagttg cccaggggtg cagtgcagcc cgggctgag gtgtagcagt catcgatacc
240
agccatcatg agcagcttct taggcacagg tgcggagacg atgccagtgc ccctgggtgc
300
agggatgagg cgtaccagca cagagccgca gcggcctgtc acctgggtgag ggaaggagtc
360
aggagacggg gggccgaggg agcctgcccc acggcaggcc catcacctgc caccagccta
420
ccttgcaagg gacagtgtgg ggcttgccga tcttgttccc ccagtagcct ctgcgcacgg
480
ggacgatgga gagcttggcc aggatgatgg cccacggat ggcgggtggc acctccttgg
540
agcacttaac acccagaccg acgtggccat tgtagtcccc gatagcaaca aatgccttga
600
acctgggtcg ctggccggca cgggtctgct tctgcactgg cataatcttc aaaacctcat
660
ccttgagaga gggccccagg aaaaagtcaa tgatctctga ttccttaatg ggcagagaga
720
agagatagat ctctccagg gacttgatct tcatgtcctt gaccaagcgg cccaacttgg
780
tgacgggcat ccactcctta tctccggcct tgcctccgcg agctccgcg cctcggcccc
840
ggccccgtcc acggcccgca ccccgccct ggtggccctg ggatggggaa ccgcggtggc
900
ttccgcgag gtttcggcag tggcatccgg ggccggggtc gcggccgtgg acggggccgg
960
ggccgaggcc gcggagctcg cggaggcaag gccgaggata aggagtggat gcccgtcacc
1020
aagttgggcc gcttgggtcaa ggacatgaag atcaagtcct tggaggagat ctatctcttc
1080
tccctgccc ttaaggaatc agagatcatt gatttcttcc tgggggcctc tctcaaggat
1140
gaggttttga agattatgcc agtgcagaag cagacccgtg ccggccagcg caccaggttc
1200
aaggcatttg ttgctatcgg ggactacaat ggccacgtcg gtctgggtgt taagtgtctc
1260
aaggaggtgg ccaccgccat ccgtggggcc atcatcctgg ccaagctctc catcgtcccc
1320
gtgcgcagag gctactgggg gaacaagatc ggcaagcccc aactgtctcc ttgcaagggtg
1380
acaggccgct gcggctctgt gctggtacgc ctcatcctg caccagggg cactggcatc
1440
gtctccgcac ctgtgcctaa gaagctgtc atgatggctg gtatcgatga ctgctacacc
1500
tcagccggg gctgcactgc caccctgggc aacttcgcca aggccacctt tgatgccatt
1560
tctaagacct acagctacct gacccccgac ctctggaagg agactgtatt caccaagtct
1620
ccctatcagg agttcactga ccacctgtc aagacccaca ccagagtctc cgtgcagcgg
1680
actcaggctc cagctgtggc tacaacatag ggtttttata caagaaaaat aaagtgaatt
1740

aagctgtcac cccaccatgg agaaaagagt cttttggttc tttttaacat aagtgattag
 1800
 tttaagagta tgctgaggag cactgggct taaagaagga tgtaaataag acccaaatac
 1860
 atagggacca ggcgtgctt tctcatgttc aaaaaagcag tcctccacca ctgaactcca
 1920
 ttctctcagg gggctcaatg aaggctaacc aatccgatgc atgtgtaggt aacagtccca
 1980
 tggactggca cttgtaaaca gccaatgcca aaccatcag gttcccaatg agatagacca
 2040
 aacctgaag aaacttctgg cttgaacttt ctaacatctt gaaagtggct gaaatggcca
 2100
 taagtgcctg aatgggtcgc caggccatca tacacaccat catagtaggg aagatggaga
 2160
 tagtattgcc tgccatgtac atgatgaaga gattcatggg aatctgtttg aggggaccca
 2220
 aggcgatgtc ccagcagcgc ttctccacca ggatccggtc tgtctcttgc acgctggat
 2280
 caggcacttg cttgtccaag taaccgactg ggtagagcga gtctccctgg ccactgcccc
 2340
 ggtcacttcg acccctgctg cctcctccag gcccgcttag ctcaatggcc cacttgaagc
 2400
 gccggcctcg gttagccacc agggccccct gggccgtcat ggcaacagct gcgtcctata
 2460
 gcctcgatgc ttctcagtc aaagcgtact ccacaacagg cccaccagcg ttctccgctt
 2520
 tgtctcacc
 2530

<210> 6184

<211> 308

<212> PRT

<213> Homo sapiens

<400> 6184

Arg	Ala	Ser	Thr	Pro	Tyr	Leu	Arg	Pro	Cys	Leu	Arg	Glu	Leu	Arg	Gly
1				5				10					15		
Leu	Gly	Pro	Gly	Pro	Val	His	Gly	Arg	Asp	Pro	Gly	Pro	Gly	Gly	Pro
			20					25					30		
Gly	Met	Gly	Asn	Arg	Gly	Gly	Phe	Arg	Gly	Gly	Phe	Gly	Ser	Gly	Ile
		35					40					45			
Arg	Gly	Arg	Gly	Arg	Gly	Arg	Gly	Arg	Gly	Arg	Gly	Arg	Gly	Arg	Gly
	50					55					60				
Ala	Arg	Gly	Gly	Lys	Ala	Glu	Asp	Lys	Glu	Trp	Met	Pro	Val	Thr	Lys
65					70					75					80
Leu	Gly	Arg	Leu	Val	Lys	Asp	Met	Lys	Ile	Lys	Ser	Leu	Glu	Glu	Ile
				85						90					95
Tyr	Leu	Phe	Ser	Leu	Pro	Ile	Lys	Glu	Ser	Glu	Ile	Ile	Asp	Phe	Phe
			100					105					110		
Leu	Gly	Ala	Ser	Leu	Lys	Asp	Glu	Val	Leu	Lys	Ile	Met	Pro	Val	Gln
		115					120					125			
Lys	Gln	Thr	Arg	Ala	Gly	Gln	Arg	Thr	Arg	Phe	Lys	Ala	Phe	Val	Ala
		130				135					140				
Ile	Gly	Asp	Tyr	Asn	Gly	His	Val	Gly	Leu	Gly	Val	Lys	Cys	Ser	Lys


```

145          150          155          160
Glu Val Ala Thr Ala Ile Arg Gly Ala Ile Ile Leu Ala Lys Leu Ser
          165          170          175
Ile Val Pro Val Arg Arg Gly Tyr Trp Gly Asn Lys Ile Gly Lys Pro
          180          185          190
His Thr Val Pro Cys Lys Val Thr Gly Arg Cys Gly Ser Val Leu Val
          195          200          205
Arg Leu Ile Pro Ala Pro Arg Gly Thr Gly Ile Val Ser Ala Pro Val
          210          215          220
Pro Lys Lys Leu Leu Met Met Ala Gly Ile Asp Asp Cys Tyr Thr Ser
225          230          235          240
Ala Arg Gly Cys Thr Ala Thr Leu Gly Asn Phe Ala Lys Ala Thr Phe
          245          250          255
Asp Ala Ile Ser Lys Thr Tyr Ser Tyr Leu Thr Pro Asp Leu Trp Lys
          260          265          270
Glu Thr Val Phe Thr Lys Ser Pro Tyr Gln Glu Phe Thr Asp His Leu
          275          280          285
Val Lys Thr His Thr Arg Val Ser Val Gln Arg Thr Gln Ala Pro Ala
          290          295          300
Val Ala Thr Thr
305

```

<210> 6185
<211> 1231
<212> DNA
<213> Homo sapiens

```

<400> 6185
cacagcttgt tcctaggaag ggcttagcaa acgggggtgg ttgtccttct tggaagccac
60
atttgtttgc ctggtgagtg gtggagggca ctgctaggcc tgctagggct gacacggcca
120
gagtcagatg acctcatctc acatccagca ggtgaaatgc agtcctttgat cccttgaaac
180
ccacctcta ggaccaaggt cactgcagta ttggatagga cctcagggag ttagcagggg
240
gctcatggtt aagagtgtga actacagctt agacctacag gggtccctgc ccagctcctc
300
cacaaaccag ctgtgcaacc ctagacaagt gagttaatgt ccctgggcct cagtttcttc
360
ttagtaaaat gtgtgtagcc atagagggct gttatgagga ttcagtcaaa tgacacatga
420
tgtcttgggc acacctggcg tggattatgg cgctgtagg agcaggaggg cttcctggag
480
gagggggcta gttgaacaga gtctagaaag tatagattgg gaagagcact ctgggaggga
540
ggatcaccat gtgcaaaggc tcagagaatg ccaccacta cctcctggaa atcaagggga
600
ttctgtgtgt ccaagggcat tgggtgtctc taggcccccg acctgtgtct gggaggtgtc
660
aaggggaagc cagatccgag gccacactt gcatgttttc aggtgaggtc cagagatata
720
tccagagagg agtggaaggg ctccgagacc tacagcccca atactgcata tgggtgtggac
780

```

ttcctggtgc ccgtgatggg ctatatctgc cgcattctgcc acaagttcta tcacagcaac
 840
 tcagggggcac agctctccca ctgcaagtcc ctggggccact ttgagaacct gcagaaatac
 900
 aaggcgggcca agaaccaccag cccaccacc cgcacctgtga gccgcccgtg cgcaatcaac
 960
 gcccgggaacg ctttgacagc cctgttcacc tccagcggcc gccaccctc ccagcccaac
 1020
 acccaggaca aaacaccag caaggtgacg gctcgaccct cccagcccc actacctcgg
 1080
 cgctcaaccc gcctcaaac ctgatagagg gacctccctg tccctggcct gcctgggtcc
 1140
 agatctgcta atgcttttta ggagtctgcc tggaaacttt gacatggttc atgtttttac
 1200
 tcaaaatcca ataaaaaag gtaagtttgg c
 1231

<210> 6186

<211> 133

<212> PRT

<213> Homo sapiens

<400> 6186

Val Arg Ser Arg Asp Ile Ser Arg Glu Glu Trp Lys Gly Ser Glu Thr
 1 5 10 15
 Tyr Ser Pro Asn Thr Ala Tyr Gly Val Asp Phe Leu Val Pro Val Met
 20 25 30
 Gly Tyr Ile Cys Arg Ile Cys His Lys Phe Tyr His Ser Asn Ser Gly
 35 40 45
 Ala Gln Leu Ser His Cys Lys Ser Leu Gly His Phe Glu Asn Leu Gln
 50 55 60
 Lys Tyr Lys Ala Ala Lys Asn Pro Ser Pro Thr Thr Arg Pro Val Ser
 65 70 75 80
 Arg Arg Cys Ala Ile Asn Ala Arg Asn Ala Leu Thr Ala Leu Phe Thr
 85 90 95
 Ser Ser Gly Arg Pro Pro Ser Gln Pro Asn Thr Gln Asp Lys Thr Pro
 100 105 110
 Ser Lys Val Thr Ala Arg Pro Ser Gln Pro Pro Leu Pro Arg Arg Ser
 115 120 125
 Thr Arg Leu Lys Thr
 130

<210> 6187

<211> 909

<212> DNA

<213> Homo sapiens

<400> 6187

nagtcctccc aaagtacttg tgtccgggtg gtggactgga ttcgctgcgg agccctggaa
 60
 gctgcctttc cttctccctg tgcttaacca gaggtgccca tgggttggaac aatgaggctg
 120
 gtcacagcag cactgttact gggctctcatg atgggtgtca ctggagacga ggatgagaac
 180

agcccgtgtg cccatgaggc cctcttggac gaggacaccc tcttttgcca gggccttgaa
 240
 gttttctacc cagagttggg gaacattggc tgcaagggtg ttcctgattg taacaactac
 300
 agacagaaga tcacctctcg gatggagccg atagtcaagt tccggggggc cgtgtacggc
 360
 gcaacctata tcctggtgat ggtggatcca gatgcccta gcagagcaga acccagacag
 420
 agattctgga gacattggct ggtaacagat atcaagggcg ccgacctgaa gaaaggggaag
 480
 attcagggcc aggagttatc agcctaccag gctccctccc caccggcaca cagtggcttc
 540
 catcgctacc agttctttgt ctatcttcag gaaggaaaag tcatctctct ccttcccaag
 600
 gaaaacaaaa ctcgaggctc ttggaaaatg gacagatttc tgaaccgttt ccacctgggc
 660
 gaacctgaag caagcaccca gttcatgacc cagaactacc aggactcacc aacctccag
 720
 gctcccagag aaagggccag cgagcccaag cacaaaaacc aggcggagat agctgcctgc
 780
 tagatagccg gctttgccat ccgggcatgt ggccacactg cccaccaccg acgatgtggg
 840
 tatggaaccc cctctggata cagaaccctt tcttttccaa attaaaaaaa aaaatcatcc
 900
 agggcaaaa
 909

<210> 6188

<211> 227

<212> PRT

<213> Homo sapiens

<400> 6188

Met	Gly	Trp	Thr	Met	Arg	Leu	Val	Thr	Ala	Ala	Leu	Leu	Leu	Gly	Leu
1				5				10						15	
Met	Met	Val	Val	Thr	Gly	Asp	Glu	Asp	Glu	Asn	Ser	Pro	Cys	Ala	His
		20					25						30		
Glu	Ala	Leu	Leu	Asp	Glu	Asp	Thr	Leu	Phe	Cys	Gln	Gly	Leu	Glu	Val
	35					40					45				
Phe	Tyr	Pro	Glu	Leu	Gly	Asn	Ile	Gly	Cys	Lys	Val	Val	Pro	Asp	Cys
	50				55				60						
Asn	Asn	Tyr	Arg	Gln	Lys	Ile	Thr	Ser	Trp	Met	Glu	Pro	Ile	Val	Lys
65				70				75					80		
Phe	Pro	Gly	Ala	Val	Tyr	Gly	Ala	Thr	Tyr	Ile	Leu	Val	Met	Val	Asp
			85				90						95		
Pro	Asp	Ala	Pro	Ser	Arg	Ala	Glu	Pro	Arg	Gln	Arg	Phe	Trp	Arg	His
		100					105					110			
Trp	Leu	Val	Thr	Asp	Ile	Lys	Gly	Ala	Asp	Leu	Lys	Lys	Gly	Lys	Ile
	115					120					125				
Gln	Gly	Gln	Glu	Leu	Ser	Ala	Tyr	Gln	Ala	Pro	Ser	Pro	Pro	Ala	His
	130					135				140					
Ser	Gly	Phe	His	Arg	Tyr	Gln	Phe	Phe	Val	Tyr	Leu	Gln	Glu	Gly	Lys
145				150					155				160		
Val	Ile	Ser	Leu	Leu	Pro	Lys	Glu	Asn	Lys	Thr	Arg	Gly	Ser	Trp	Lys

	165		170		175										
Met	Asp	Arg	Phe	Leu	Asn	Arg	Phe	His	Leu	Gly	Glu	Pro	Glu	Ala	Ser
	180		185		190										
Thr	Gln	Phe	Met	Thr	Gln	Asn	Tyr	Gln	Asp	Ser	Pro	Thr	Leu	Gln	Ala
	195		200		205										
Pro	Arg	Glu	Arg	Ala	Ser	Glu	Pro	Lys	His	Lys	Asn	Gln	Ala	Glu	Ile
	210		215		220										
Ala	Ala	Cys													
225															

<210> 6189

<211> 2761

<212> DNA

<213> Homo sapiens

<400> 6189

```

ngccgcgctg gcattttctc ctggacaagg agagagtgcg gctgctgaga gccgagccca
60
gcaatccccg tctcttgagt cgtgaagaag ggaggcagcg aggggggttg ggttgggggc
120
tgaggcaagc cccagggctc cgctcttgcc agagggacag gagccatggc tcagaaaatg
180
gactgtggtg cgggcctcct cggtctccag gctgaggcct ccgtagaaga cagcgccttg
240
cttatgcaga ccttgatgga ggccatccag atctcagagg ctccacctac taaccaggcc
300
accgcagctg ctagtcccca gagttcacag cccccaactg ccaatgagat ggctgacatt
360
caggtttcag cagctgccgc taggcctaag tcagccttta aagtcagaa tgccaccaca
420
aaaggcccaa atggtgtcta tgatttctct caggctcata atgccaaagg tgtgcccaac
480
acgcagccca aggcagcctt taagtcccaa aatgctaccc caaagggtcc aaatgctgcc
540
tatgattttt cccaggcagc aaccactggg gagttagctg ctaacaagtc tgagatggcc
600
ttcaaggccc agaatgccac tactaaagtg ggcccaaagt ccacctacaa tttctctcag
660
tcttcaatg ccaatgacct ggccaacagc aggcctaaga cccctttcaa ggcttggaat
720
gataccacta aggccccaac agctgatacc cagaccaga atgtaaatca ggccaaaatg
780
gccacttccc aggtgacat agagaccgac ccaggatatc ctgaacctga cggtgcaact
840
gcacagacat cagcagatgg tcccaggct cagaatctgg agtcccggac aataattcgg
900
ggcaagagga cccgcaagat taataacttg aatgttgaag agaacagcag tggggatcag
960
aggcgggccc cactggctgc agggacctgg aggtctgcac cagttccagt gaccactcag
1020
aaccacctg gcgcaccccc caatgtgctc tggcagacgc cattggcttg gcagaacccc
1080
tcaggctggc aaaaccagac agccaggcag accccaccag cacgtcagag ccctccagct
1140

```

aggcagaccc caccagcctg gcagacccag aaccagtcg cttggcagaa cccagtgtatt
1200
tggccaaacc cagtaatctg gcagaaccca gtgatctggc caaaccccat tgtctggccc
1260
ggccctgttg tctggccgaa tccactggcc tggcagaatc cacctggatg gcagactcca
1320
cctggatggc agaccccacc gggtggcag ggtcctccag actggcaagg tctcctgac
1380
tggccgctac cacccgactg gccactgcc aatgattggc cacttcccac tgactggcca
1440
ctaccacctg actggatccc cgctgattgg ccaattccac ctgactggca gaacctgcgc
1500
ccctcgcta acctgcgccc ttctcccaac tcgctgcct cacagaaccc aggtgctgca
1560
cagccccgag atgtggccct tcttcaggaa agagcaaata agttggtcaa gtacttgatg
1620
cttaaggact acacaaaggc gccatcaag cgctcagaaa tgctgagaga tatcatccgt
1680
gaatacactg atgtttatcc agaaatcatt gaacgtgcat gctttgtcct agagaagaaa
1740
tttgggatcc aactgaaaga aattgacaaa gaagaacacc tgtatattct catcagtacc
1800
cccagatccc tggctggcat actgggaacg accaaagaca cacccaagct cggctcctc
1860
ttggtgatcc tgggtgtcat ctcatgaat ggcaaccgtg ccagtgaggc tgcctctgg
1920
gaggcactac gcaagatggg actgcgtcct ggggtgagac atcccctcct tggagatcta
1980
aggaaacttc tcacctatga gtttgtaaag cagaaatacc tggactacag acgagtggcc
2040
aacagcaacc ccccgagta tgagttcctc tggggcctcc gttcctacca tgagactagc
2100
aagatgaaag tgctgagatt cattgcagag gttcagaaaa gagaccctcg tgactggact
2160
gcacagtcca tggaggctgc agatgaggcc ttggatgctc tggatgctgc tgcagctgag
2220
gccgaagccc gggctgaagc aagaaccgc atgggaattg gagatgaggc tgtgtctggg
2280
ccctggagct gggatgacat tgagtttgag ctgctgacct gggatgagga aggagatctt
2340
ggagatccct ggtccagaat tccatttacc ttctgggcca gataccacca gaatgccgc
2400
tccagattcc ctacagacct tgccggctcc attattggtc ctggtggtac agccagtgc
2460
aacttcgctg ccaactttgg tgccattggg ttcttctggg ttgagtgaga tgttgatat
2520
tgctatcaat cgcagtagtc ttcccctgt gtgaggctga agcctcagat tcttctaaa
2580
cacagctatc tagagagcca catcctgttg actgaaagtg gcatgcaaga taaatttatt
2640
tgctgttctc tgtctactgc ttttttccc cttgtgtgct gtcaagtttt ggtatcagaa
2700
ataaacattg aaattgcaaa gtgaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2760

a

2761

<210> 6190

<211> 576

<212> PRT

<213> Homo sapiens

<400> 6190

```

Met Ala Thr Ser Gln Ala Asp Ile Glu Thr Asp Pro Gly Ile Ser Glu
 1           5           10           15
Pro Asp Gly Ala Thr Ala Gln Thr Ser Ala Asp Gly Ser Gln Ala Gln
      20           25           30
Asn Leu Glu Ser Arg Thr Ile Ile Arg Gly Lys Arg Thr Arg Lys Ile
      35           40           45
Asn Asn Leu Asn Val Glu Glu Asn Ser Ser Gly Asp Gln Arg Arg Ala
      50           55           60
Pro Leu Ala Ala Gly Thr Trp Arg Ser Ala Pro Val Pro Val Thr Thr
      65           70           75           80
Gln Asn Pro Pro Gly Ala Pro Pro Asn Val Leu Trp Gln Thr Pro Leu
      85           90           95
Ala Trp Gln Asn Pro Ser Gly Trp Gln Asn Gln Thr Ala Arg Gln Thr
      100          105          110
Pro Pro Ala Arg Gln Ser Pro Pro Ala Arg Gln Thr Pro Pro Ala Trp
      115          120          125
Gln Thr Gln Asn Pro Val Ala Trp Gln Asn Pro Val Ile Trp Pro Asn
      130          135          140
Pro Val Ile Trp Gln Asn Pro Val Ile Trp Pro Asn Pro Ile Val Trp
      145          150          155          160
Pro Gly Pro Val Val Trp Pro Asn Pro Leu Ala Trp Gln Asn Pro Pro
      165          170          175
Gly Trp Gln Thr Pro Pro Gly Trp Gln Thr Pro Pro Gly Trp Gln Gly
      180          185          190
Pro Pro Asp Trp Gln Gly Pro Pro Asp Trp Pro Leu Pro Pro Asp Trp
      195          200          205
Pro Leu Pro Pro Asp Trp Pro Leu Pro Thr Asp Trp Pro Leu Pro Pro
      210          215          220
Asp Trp Ile Pro Ala Asp Trp Pro Ile Pro Pro Asp Trp Gln Asn Leu
      225          230          235          240
Arg Pro Ser Pro Asn Leu Arg Pro Ser Pro Asn Ser Arg Ala Ser Gln
      245          250          255
Asn Pro Gly Ala Ala Gln Pro Arg Asp Val Ala Leu Leu Gln Glu Arg
      260          265          270
Ala Asn Lys Leu Val Lys Tyr Leu Met Leu Lys Asp Tyr Thr Lys Val
      275          280          285
Pro Ile Lys Arg Ser Glu Met Leu Arg Asp Ile Ile Arg Glu Tyr Thr
      290          295          300
Asp Val Tyr Pro Glu Ile Ile Glu Arg Ala Cys Phe Val Leu Glu Lys
      305          310          315          320
Lys Phe Gly Ile Gln Leu Lys Glu Ile Asp Lys Glu Glu His Leu Tyr
      325          330          335
Ile Leu Ile Ser Thr Pro Glu Ser Leu Ala Gly Ile Leu Gly Thr Thr
      340          345          350
Lys Asp Thr Pro Lys Leu Gly Leu Leu Leu Val Ile Leu Gly Val Ile

```

355 360 365
 Phe Met Asn Gly Asn Arg Ala Ser Glu Ala Val Leu Trp Glu Ala Leu
 370 375 380
 Arg Lys Met Gly Leu Arg Pro Gly Val Arg His Pro Leu Leu Gly Asp
 385 390 395 400
 Leu Arg Lys Leu Leu Thr Tyr Glu Phe Val Lys Gln Lys Tyr Leu Asp
 405 410 415
 Tyr Arg Arg Val Pro Asn Ser Asn Pro Pro Glu Tyr Glu Phe Leu Trp
 420 425 430
 Gly Leu Arg Ser Tyr His Glu Thr Ser Lys Met Lys Val Leu Arg Phe
 435 440 445
 Ile Ala Glu Val Gln Lys Arg Asp Pro Arg Asp Trp Thr Ala Gln Phe
 450 455 460
 Met Glu Ala Ala Asp Glu Ala Leu Asp Ala Leu Asp Ala Ala Ala Ala
 465 470 475 480
 Glu Ala Glu Ala Arg Ala Glu Ala Arg Thr Arg Met Gly Ile Gly Asp
 485 490 495
 Glu Ala Val Ser Gly Pro Trp Ser Trp Asp Asp Ile Glu Phe Glu Leu
 500 505 510
 Leu Thr Trp Asp Glu Glu Gly Asp Phe Gly Asp Pro Trp Ser Arg Ile
 515 520 525
 Pro Phe Thr Phe Trp Ala Arg Tyr His Gln Asn Ala Arg Ser Arg Phe
 530 535 540
 Pro Gln Thr Phe Ala Gly Pro Ile Ile Gly Pro Gly Gly Thr Ala Ser
 545 550 555 560
 Ala Asn Phe Ala Ala Asn Phe Gly Ala Ile Gly Phe Phe Trp Val Glu
 565 570 575

<210> 6191
 <211> 3021
 <212> DNA
 <213> Homo sapiens

<400> 6191
 ctttgagaag gaacctgtcc cctcagggat taagcaagca cagccctagt tgatcaccca
 60
 gcataaaaag tcttggaatc tctcagagat gaacctgtgt atgggagttt tgcttaagtg
 120
 gtacttcaag aagggtgctc tgtttacttt ggttttgac tgccatgcga ccagggtggtg
 180
 cagggtctccc aaatgccacc cccctccaag cttccctctt tgctetaagt cctcaggcct
 240
 cctgggacctg ggacagatgg ttgtttgtgt catcaggact cgtgggggttc tatgcgtgga
 300
 gcactcacgc cagcctaagc tgggatccca gctcagaggt caggccatgt tgggatgttt
 360
 aggggaagtg atgcattatc aggagacata tctactgtcc cctgccctgt acccccaggc
 420
 attgatctgg agaacattgt gtactacaag gacgacaccc actactttgt gatgacagcc
 480
 aagaagcagt gcctgctgcg gctgggggtg ctgcgccagg actggccaga caccaatcgg
 540
 ctgctgggca gtgccaatgt ggtgaccgag gctctgcagc gctttaccgc ggcagctgct
 600

gactttgccca cccatggcaa gctcgggaaa ctagagtttg cccaggatgc ccatgggcag
660
cctgatgtct ctgcctttga cttcacgagc atgatgcggg cagagagttc tgctcgtgtg
720
caagagaagc atggcgcccc cctgctgctg ggactgggtg gggactgcct ggtggagccc
780
ttctggcccc tgggcactgg agtggcacgg ggcttcctgg cagcctttga tgcagcctgg
840
atggtgaagc ggtgggcaga gggcgctgag tccctagagg tgttggtga gcgtgagagc
900
ctgtaccagc ttctgtcaca gacatcccca gaaaacatgc atcgcaatgt ggcccagtat
960
gggctggacc cagccacccc ctaccccaac ctgaacctcc gggcagtga ccccaatcag
1020
gtacgagacc tgtatgatgt gctagccaag gagcctgtgc agaggaacaa cgacaagaca
1080
gatacaggga tgccagccac cgggtcggca ggcaccagg aggagctgct acgctgggtg
1140
caggagcaga cagctgggta cccgggagtc cagctctccg atttgtcttc ctctgggct
1200
gatgggctag ctctgtgtgc cctgggtgac cggctgcagc ctggcctgct ggaaccctca
1260
gagctgcagg ggctgggagc tctggaagca actgcttggg cactaaagggt ggcagagaat
1320
gagctgggca tcacaccggt ggtgtctgca caggccgtgg tagcaggag tgaccactg
1380
ggcctcattg cctacctcag ccacttcac agtgccctca agagcatggc ccacagccca
1440
ggccctgtca gccaggcctc cccagggacc tccagtgtg tattattcct tagtaaactt
1500
cagaggaccc tgcagcgatc ccgggccaag gacttattgc aggaaaatgc agaggatgct
1560
ggtggcaaga agctgcgctt ggagatggag gccgagaccc caagtactga ggtgccacct
1620
gaccagagc ctggtgtacc cctgacaccc ccaccccaac accaggaggc cgggtgctgg
1680
gacctgtgtg cactttgtgg ggaacacctc tatgtcctgg aacgcctctg tgtcaacggc
1740
catttcttcc accggagctg ctcccgctgc catacctgtg aggccacact gtggccaggt
1800
ggctatgagc agcaccagg agatggacat ttctactgcc tccagcacct gccccagaca
1860
gaccacaaag cggaaggcag cgatagaggc cctgagagtc cggagctccc cacaccaagt
1920
gagaatagca tgccaccagg cctotcaact cccacagcct cgcaggaggg ggccggctct
1980
gttcagatc ccagccagcc caccgctcg cagatccgcc tctccagccc ggagcgccag
2040
cggttgtcct cccttaacct taccctgac ccggaaatgg agcctccacc caagcctccc
2100
cgcagctgct ccgccttggc ccgccagcc ctggagagca gctttgtggg ctggggcctg
2160
ccagtccaga gccctcaagc tcttgtggcc atggagaagg aggaaaaaga gagtcccttc
2220

tccagtgaag aggaagaaga agatgtgcct ttggactcag atgtggaaca ggccctgcag
 2280
 acctttgccca agacctcagg caccatgaat aactacccaa catggcgctcg gactctgctg
 2340
 cgccgtgcga aggaggagga gatgaagagg ttctgcaagg cccagacat ccaacggcga
 2400
 ctaaatagaga ttgaggctgc cttgagggag ctgagggccg agggcgtaga gctggagctg
 2460
 gccttgaggc gccagagcag ttccccagaa cagcaaaaga aactatgggt aggacagctg
 2520
 ctacagctcg ttgacaagaa aaacagcctg gtggctgagg aggccgagct catgatcacg
 2580
 gtgcaggaat tgaatctgga ggagaaacag tggcagctgg accaggagct acgaggctac
 2640
 atgaaccggg aagaaaacct aaagacagct gctgatcggc aggtgagga ccaggtcctg
 2700
 aggaagctgg tggatttgggt caaccagaga gatgcctca tccgcttcca ggaggagcgc
 2760
 aggtcagcg agctggcctt ggggacaggg gcccagggct agacgaggggt gggccgtctg
 2820
 ctttcgttcc cacaagaaa gcacctcacc ccagcacagt gccaccctg ttcactctggg
 2880
 ctgcctggca gagagccttg ctgtttacaa ttaaaatgtt tctgccacaa aaaaaaaaaa
 2940
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 3000
 aaaaaaaaaa aaaaaaaaaa a
 3021

<210> 6192

<211> 815

<212> PRT

<213> Homo sapiens

<400> 6192

Met	Phe	Arg	Glu	Gly	Asp	Ala	Leu	Ser	Gly	Asp	Ile	Ser	Thr	Val	Pro
1				5					10					15	
Cys	Pro	Val	Pro	Pro	Gly	Ile	Asp	Leu	Glu	Asn	Ile	Val	Tyr	Tyr	Lys
			20					25					30		
Asp	Asp	Thr	His	Tyr	Phe	Val	Met	Thr	Ala	Lys	Lys	Gln	Cys	Leu	Leu
		35					40					45			
Arg	Leu	Gly	Val	Leu	Arg	Gln	Asp	Trp	Pro	Asp	Thr	Asn	Arg	Leu	Leu
	50					55				60					
Gly	Ser	Ala	Asn	Val	Val	Thr	Glu	Ala	Leu	Gln	Arg	Phe	Thr	Arg	Ala
65				70					75					80	
Ala	Ala	Asp	Phe	Ala	Thr	His	Gly	Lys	Leu	Gly	Lys	Leu	Glu	Phe	Ala
			85					90					95		
Gln	Asp	Ala	His	Gly	Gln	Pro	Asp	Val	Ser	Ala	Phe	Asp	Phe	Thr	Ser
		100					105					110			
Met	Met	Arg	Ala	Glu	Ser	Ser	Ala	Arg	Val	Gln	Glu	Lys	His	Gly	Ala
	115					120					125				
Arg	Leu	Leu	Leu	Gly	Leu	Val	Gly	Asp	Cys	Leu	Val	Glu	Pro	Phe	Trp
	130				135					140					
Pro	Leu	Gly	Thr	Gly	Val	Ala	Arg	Gly	Phe	Leu	Ala	Ala	Phe	Asp	Ala

145					150					155				160
Ala	Trp	Met	Val	Lys	Arg	Trp	Ala	Glu	Gly	Ala	Glu	Ser	Leu	Glu
				165					170					175
Leu	Ala	Glu	Arg	Glu	Ser	Leu	Tyr	Gln	Leu	Leu	Ser	Gln	Thr	Ser
			180					185					190	
Glu	Asn	Met	His	Arg	Asn	Val	Ala	Gln	Tyr	Gly	Leu	Asp	Pro	Ala
	195					200					205			
Arg	Tyr	Pro	Asn	Leu	Asn	Leu	Arg	Ala	Val	Thr	Pro	Asn	Gln	Val
	210				215					220				
Asp	Leu	Tyr	Asp	Val	Leu	Ala	Lys	Glu	Pro	Val	Gln	Arg	Asn	Asn
225				230					235				240	
Lys	Thr	Asp	Thr	Gly	Met	Pro	Ala	Thr	Gly	Ser	Ala	Gly	Thr	Gln
			245					250					255	
Glu	Leu	Leu	Arg	Trp	Cys	Gln	Glu	Gln	Thr	Ala	Gly	Tyr	Pro	Gly
			260				265					270		
His	Val	Ser	Asp	Leu	Ser	Ser	Ser	Trp	Ala	Asp	Gly	Leu	Ala	Leu
	275					280					285			
Ala	Leu	Val	Tyr	Arg	Leu	Gln	Pro	Gly	Leu	Leu	Glu	Pro	Ser	Glu
	290				295				300					
Gln	Gly	Leu	Gly	Ala	Leu	Glu	Ala	Thr	Ala	Trp	Ala	Leu	Lys	Val
305				310					315				320	
Glu	Asn	Glu	Leu	Gly	Ile	Thr	Pro	Val	Val	Ser	Ala	Gln	Ala	Val
			325					330					335	
Ala	Gly	Ser	Asp	Pro	Leu	Gly	Leu	Ile	Ala	Tyr	Leu	Ser	His	Phe
	340					345					350			
Ser	Ala	Phe	Lys	Ser	Met	Ala	His	Ser	Pro	Gly	Pro	Val	Ser	Gln
	355				360				365					
Ser	Pro	Gly	Thr	Ser	Ser	Ala	Val	Leu	Phe	Leu	Ser	Lys	Leu	Gln
	370				375				380					
Thr	Leu	Gln	Arg	Ser	Arg	Ala	Lys	Asp	Leu	Leu	Gln	Glu	Asn	Ala
385				390					395				400	
Asp	Ala	Gly	Gly	Lys	Lys	Leu	Arg	Leu	Glu	Met	Glu	Ala	Glu	Thr
			405					410					415	
Ser	Thr	Glu	Val	Pro	Pro	Asp	Pro	Glu	Pro	Gly	Val	Pro	Leu	Thr
	420					425					430			
Pro	Ser	Gln	His	Gln	Glu	Ala	Gly	Ala	Gly	Asp	Leu	Cys	Ala	Leu
	435				440						445			
Gly	Glu	His	Leu	Tyr	Val	Leu	Glu	Arg	Leu	Cys	Val	Asn	Gly	His
	450				455				460					
Phe	His	Arg	Ser	Cys	Phe	Arg	Cys	His	Thr	Cys	Glu	Ala	Thr	Leu
465				470					475				480	
Pro	Gly	Gly	Tyr	Glu	Gln	His	Pro	Gly	Asp	Gly	His	Phe	Tyr	Cys
			485					490					495	
Gln	His	Leu	Pro	Gln	Thr	Asp	His	Lys	Ala	Glu	Gly	Ser	Asp	Arg
	500						505					510		
Pro	Glu	Ser	Pro	Glu	Leu	Pro	Thr	Pro	Ser	Glu	Asn	Ser	Met	Pro
	515					520					525			
Gly	Leu	Ser	Thr	Pro	Thr	Ala	Ser	Gln	Glu	Gly	Ala	Gly	Pro	Val
	530				535					540				
Asp	Pro	Ser	Gln	Pro	Thr	Arg	Arg	Gln	Ile	Arg	Leu	Ser	Ser	Pro
545				550					555				560	
Arg	Gln	Arg	Leu	Ser	Ser	Leu	Asn	Leu	Thr	Pro	Asp	Pro	Glu	Met
			565					570				575		
Pro	Pro	Pro	Lys	Pro	Pro	Arg	Ser	Cys	Ser	Ala	Leu	Ala	Arg	His

Leu	Glu	Ser	Ser	Phe	Val	Gly	Trp	Gly	Leu	Pro	Val	Gln	Ser	Pro	Gln		
		595					600					605					
Ala	Leu	Val	Ala	Met	Glu	Lys	Glu	Glu	Lys	Glu	Ser	Pro	Phe	Ser	Ser		
		610				615						620					
Glu	Glu	Glu	Glu	Glu	Asp	Val	Pro	Leu	Asp	Ser	Asp	Val	Glu	Gln	Ala		
625					630					635					640		
Leu	Gln	Thr	Phe	Ala	Lys	Thr	Ser	Gly	Thr	Met	Asn	Asn	Tyr	Pro	Thr		
				645					650					655			
Trp	Arg	Arg	Thr	Leu	Leu	Arg	Arg	Ala	Lys	Glu	Glu	Glu	Met	Lys	Arg		
			660					665					670				
Phe	Cys	Lys	Ala	Gln	Thr	Ile	Gln	Arg	Arg	Leu	Asn	Glu	Ile	Glu	Ala		
		675					680					685					
Ala	Leu	Arg	Glu	Leu	Glu	Ala	Glu	Gly	Val	Lys	Leu	Glu	Leu	Ala	Leu		
		690				695					700						
Arg	Arg	Gln	Ser	Ser	Ser	Pro	Glu	Gln	Gln	Lys	Lys	Leu	Trp	Val	Gly		
705					710					715					720		
Gln	Leu	Leu	Gln	Leu	Val	Asp	Lys	Lys	Asn	Ser	Leu	Val	Ala	Glu	Glu		
				725					730					735			
Ala	Glu	Leu	Met	Ile	Thr	Val	Gln	Glu	Leu	Asn	Leu	Glu	Glu	Lys	Gln		
			740					745				750					
Trp	Gln	Leu	Asp	Gln	Glu	Leu	Arg	Gly	Tyr	Met	Asn	Arg	Glu	Glu	Asn		
		755					760					765					
Leu	Lys	Thr	Ala	Ala	Asp	Arg	Gln	Ala	Glu	Asp	Gln	Val	Leu	Arg	Lys		
		770				775					780						
Leu	Val	Asp	Leu	Val	Asn	Gln	Arg	Asp	Ala	Leu	Ile	Arg	Phe	Gln	Glu		
785					790				795						800		
Glu	Arg	Arg	Leu	Ser	Glu	Leu	Ala	Leu	Gly	Thr	Gly	Ala	Gln	Gly			
				805					810					815			

```
<210> 6193
<211> 2893
<212> DNA
<213> Homo sapiens
```

```

<400> 6193
nntgtatttt aaaacttggt tttttagttt cattctgaga aattacattg agggtagagc
60
ctgttcatta ccttatccat gcatttttct gcttatttaa attattttac ttcaccaagc
120
cattcatttt tttagaacat ccttcaaaga gtcatgcat ctactgagg acacctgacc
180
ttttgaagct tcataattca catctagatg tcaccggtct tccccatggt aacagttctg
240
accatgtttt attatatatg ccttcggcgc cgagccagga cagctacaag aggagaaatg
300
atgaacaccc atagagctat agaatcaaac agccagactt cccctctcaa tgcagaggta
360
gtccagtatg ccaaagaagt agtggatttc agttcccat atggaagtga gaatagtatg
420
tcctatacta tgtggaattt ggctgggtga ccaaatgtat tccaagtctc tggtgacttt
480
actcagacag ctgtgtttcg aacttatggg acatggtggg atcagtgtcc tagtgcttcc
540

```

ttgccattca agaggacgcc acctaatttt cagagccagg actatgtgga acttactttt
600
gaacaacagg tgtatcctac agctgtacat gttctagaaa cctatcatcc cggagcagtc
660
attagaattc tcgcttggtc tgcaaatcct tattccccaa atccaccagc tgaagtaaga
720
tgggagattc tttggtcaga gagacctacg aagggtgaatg cttcccaagc tcgccagttt
780
aaaccttgta ttaagcagat aaatttcccc acaaacttta tacgactgga agtaaatagt
840
tctcttctgg aatattacac tgaattagat gcagttgtgc tacatgggtg gaaggacaag
900
ccagtgtctt ctctcaagac ttcacttatt gacatgaatg atatagaaga tgatgcctat
960
gcagaaaagg atggttgtgg aatggacagt cttacaaaaa agtttagcag tgctgtcctc
1020
ggggaagggc caaataatgg gtattttgat aaactacctt atgagcttat tcagctgatt
1080
ctgaatcacc ttacactacc agacctgtgt agattagcac agacttgcaa actactgagc
1140
cagcattgct gtgatcctct gcaatacacc cacctcaatc tgcaaccata ctgggcaaaa
1200
ctagatgaca cttctctgga atttctacag tctcgtgca cttctgtcca gtggcttaat
1260
ttatcttgga ctggcaatag aggcttcacc tctgttgca gatttagcag gtttctgaag
1320
gtttgtggat ccgaattagt acgccttgaa ttgtcttgca gccactttct taatgaaact
1380
tgcttagaag ttatttctga gatgtgtcca aatctacagg ccttaaactc ctctcctgt
1440
gataagctac cacctcaagc tttcaaccac attgccaagt tatgcagcct taaacgactt
1500
gttctctatc gaacaaaagt agagcaaaca gcactgtcca gcattttgaa cttctgttca
1560
gagcttcagc acctcagttt aggcagttgt gtcattgattg aagactatga tgtgatagct
1620
agcatgatag gagccaagtg taaaaaactc cggaccctgg atctgtggag atgtaagaat
1680
attactgaga atggaatagc agaactggct tctgggtgtc cactactgga ggagcttgac
1740
cttggtgtgt gcccaactct gcagagcagc accgggtgtc tcaccagact ggcacaccag
1800
ctcccaaact tgcaaaaact ctttcttaca gctaatagat ctgtgtgtga cacagacatt
1860
gatgaattgg catgtaattg taccaggtta cagcagctgg acatattagg aacaagaatg
1920
gtaagtccgg catccttaag aaaactcctg gaatcttgta aagatcttcc tttacttgat
1980
gtgtccttct gttegcagat tgataacaga gctgtgctag aactgaatgc aagctttcca
2040
aaagtgttca taaaaagag ctttactcag tgacttaata tatgttctgt attaaaatta
2100
atgtgcttgg ttgggggtta attttgggat tgggtttggg ttttgttttt agttgtttta
2160

atggtaagaa ttaagacatt ttagatattt aaagaaaaat atgaaattgt ccattaaatc
 2220
 aagtaaaaat gtgcacaaat gttttcataa aatactgcaa gcacttctct tcaagaatat
 2280
 gagtggatat tatttttacc ttatgttaat cagtgatatg ctttagtcaa taatatgatt
 2340
 gataaaagaa taacatggaa tcatgctaac ttattttcaa aggaacactg agcaataaag
 2400
 tatcgtggca tttatgcaaa aaaaaaagtt aattttttac accttcatgt aaggatgtct
 2460
 tattaagcct gtgacctggc aagtgttttg tttggtatgt acaaaatggt cagagctagt
 2520
 tggagaatga gacatgcttt tccagctggt tggttatttc tctggattaa ctgttcaact
 2580
 ggaaaatttt tagtttttct agccagggtg ggtggcacac acttgtagtc ctacgcacac
 2640
 gggagggtgga ggcaggagga ttacttgaga tgggattttg agactctagt gtacttatga
 2700
 ttgcacctgt gaggagccac tgcaactcaa cctgggcaat atagegagtc cttttctctt
 2760
 aaaaaaaatt gtagtgtttc cacttttctt ctgatatttt tgtctatttc actactggat
 2820
 aatgccataa taaaaatttg ggtataatca agaataagag gtaaactact aaataaaaaa
 2880
 agctttccaa ctg
 2893

<210> 6194

<211> 621

<212> PRT

<213> Homo sapiens

<400> 6194

Met	Ser	Pro	Val	Phe	Pro	Met	Leu	Thr	Val	Leu	Thr	Met	Phe	Tyr	Tyr
1				5						10				15	
Ile	Cys	Leu	Arg	Arg	Arg	Ala	Arg	Thr	Ala	Thr	Arg	Gly	Glu	Met	Met
		20						25					30		
Asn	Thr	His	Arg	Ala	Ile	Glu	Ser	Asn	Ser	Gln	Thr	Ser	Pro	Leu	Asn
		35					40					45			
Ala	Glu	Val	Val	Gln	Tyr	Ala	Lys	Glu	Val	Val	Asp	Phe	Ser	Ser	His
	50					55				60					
Tyr	Gly	Ser	Glu	Asn	Ser	Met	Ser	Tyr	Thr	Met	Trp	Asn	Leu	Ala	Gly
65				70					75				80		
Val	Pro	Asn	Val	Phe	Pro	Ser	Ser	Gly	Asp	Phe	Thr	Gln	Thr	Ala	Val
			85					90					95		
Phe	Arg	Thr	Tyr	Gly	Thr	Trp	Trp	Asp	Gln	Cys	Pro	Ser	Ala	Ser	Leu
			100					105					110		
Pro	Phe	Lys	Arg	Thr	Pro	Pro	Asn	Phe	Gln	Ser	Gln	Asp	Tyr	Val	Glu
		115					120					125			
Leu	Thr	Phe	Glu	Gln	Gln	Val	Tyr	Pro	Thr	Ala	Val	His	Val	Leu	Glu
	130					135					140				
Thr	Tyr	His	Pro	Gly	Ala	Val	Ile	Arg	Ile	Leu	Ala	Cys	Ser	Ala	Asn
145				150						155				160	
Pro	Tyr	Ser	Pro	Asn	Pro	Pro	Ala	Glu	Val	Arg	Trp	Glu	Ile	Leu	Trp

					165											175
Ser	Glu	Arg	Pro	Thr	Lys	Val	Asn	Ala	Ser	Gln	Ala	Arg	Gln	Phe	Lys	
			180					185					190			
Pro	Cys	Ile	Lys	Gln	Ile	Asn	Phe	Pro	Thr	Asn	Leu	Ile	Arg	Leu	Glu	
		195					200					205				
Val	Asn	Ser	Ser	Leu	Leu	Glu	Tyr	Tyr	Thr	Glu	Leu	Asp	Ala	Val	Val	
	210					215					220					
Leu	His	Gly	Val	Lys	Asp	Lys	Pro	Val	Leu	Ser	Leu	Lys	Thr	Ser	Leu	
225					230					235					240	
Ile	Asp	Met	Asn	Asp	Ile	Glu	Asp	Asp	Ala	Tyr	Ala	Glu	Lys	Asp	Gly	
				245					250					255		
Cys	Gly	Met	Asp	Ser	Leu	Asn	Lys	Lys	Phe	Ser	Ser	Ala	Val	Leu	Gly	
		260						265					270			
Glu	Gly	Pro	Asn	Asn	Gly	Tyr	Phe	Asp	Lys	Leu	Pro	Tyr	Glu	Leu	Ile	
	275						280					285				
Gln	Leu	Ile	Leu	Asn	His	Leu	Thr	Leu	Pro	Asp	Leu	Cys	Arg	Leu	Ala	
	290					295					300					
Gln	Thr	Cys	Lys	Leu	Leu	Ser	Gln	His	Cys	Cys	Asp	Pro	Leu	Gln	Tyr	
305					310					315					320	
Ile	His	Leu	Asn	Leu	Gln	Pro	Tyr	Trp	Ala	Lys	Leu	Asp	Asp	Thr	Ser	
				325					330					335		
Leu	Glu	Phe	Leu	Gln	Ser	Arg	Cys	Thr	Leu	Val	Gln	Trp	Leu	Asn	Leu	
		340						345				350				
Ser	Trp	Thr	Gly	Asn	Arg	Gly	Phe	Ile	Ser	Val	Ala	Gly	Phe	Ser	Arg	
	355					360						365				
Phe	Leu	Lys	Val	Cys	Gly	Ser	Glu	Leu	Val	Arg	Leu	Glu	Leu	Ser	Cys	
	370				375						380					
Ser	His	Phe	Leu	Asn	Glu	Thr	Cys	Leu	Glu	Val	Ile	Ser	Glu	Met	Cys	
385				390						395				400		
Pro	Asn	Leu	Gln	Ala	Leu	Asn	Leu	Ser	Ser	Cys	Asp	Lys	Leu	Pro	Pro	
			405						410					415		
Gln	Ala	Phe	Asn	His	Ile	Ala	Lys	Leu	Cys	Ser	Leu	Lys	Arg	Leu	Val	
		420					425					430				
Leu	Tyr	Arg	Thr	Lys	Val	Glu	Gln	Thr	Ala	Leu	Leu	Ser	Ile	Leu	Asn	
	435					440						445				
Phe	Cys	Ser	Glu	Leu	Gln	His	Leu	Ser	Leu	Gly	Ser	Cys	Val	Met	Ile	
	450				455					460						
Glu	Asp	Tyr	Asp	Val	Ile	Ala	Ser	Met	Ile	Gly	Ala	Lys	Cys	Lys	Lys	
465				470						475				480		
Leu	Arg	Thr	Leu	Asp	Leu	Trp	Arg	Cys	Lys	Asn	Ile	Thr	Glu	Asn	Gly	
				485					490					495		
Ile	Ala	Glu	Leu	Ala	Ser	Gly	Cys	Pro	Leu	Leu	Glu	Glu	Leu	Asp	Leu	
			50													

595 600 605
 Ser Phe Pro Lys Val Phe Ile Lys Lys Ser Phe Thr Gln
 610 615 620

<210> 6195
 <211> 518
 <212> DNA
 <213> Homo sapiens

<400> 6195
 ggatcccaag agatattttc tgagctgaac tatgtggtca cagaaggcca gctcccagca
 60
 gcacgggact atgaggggttc gccctgttct gtgtagcccc agctgggtcc ctggggaaaa
 120
 gtttcactt ctgctgtcaa gaaccacaag ggtcaagccc catccctaca aataccaagt
 180
 acatccaaat tcttctactgg cacagaaatg gtgttacatc cactgggaac aaacctgcat
 240
 cccaccccca aggcattgtga caacaggggac tgctaattgag ctttgtccgg gtaactcatt
 300
 cacgccatca tcttgcctct tccatagtca cttattaage acaaactatg ccaaaaaacta
 360
 tgtccagcac cgcacaggat ggtaaaatgc cctgaggggc cacccecatc tgactcccg
 420
 tgagcggagt gggcagccct gcctggggagc tccagcctcc tgcacccaag tgcccccttg
 480
 ttatctctgc ctggatgcct cacaggcatc tcacgcgt
 518

<210> 6196
 <211> 117
 <212> PRT
 <213> Homo sapiens

<400> 6196
 Met Trp Ser Gln Lys Ala Ser Ser Gln Gln His Gly Thr Met Arg Val
 1 5 10 15
 Arg Pro Val Leu Cys Ser Pro Ser Trp Phe Pro Gly Glu Lys Phe Pro
 20 25 30
 Leu Leu Leu Ser Arg Thr Thr Arg Val Lys Pro His Pro Tyr Lys Tyr
 35 40 45
 Gln Val His Pro Asn Ser Ser Leu Ala Gln Lys Trp Cys Tyr Ile His
 50 55 60
 Trp Glu Gln Thr Cys Ile Pro Thr Pro Arg His Val Thr Thr Gly Thr
 65 70 75 80
 Ala Asn Glu Leu Cys Pro Gly Asn Ser Phe Thr Pro Ser Ser Cys Ser
 85 90 95
 Phe His Ser His Leu Leu Ser Thr Asn Tyr Ala Lys Asn Tyr Val Gln
 100 105 110
 His Arg Thr Gly Trp
 115

<210> 6197
 <211> 2841

<212> DNA

<213> Homo sapiens

<400> 6197

nagcattctt ccatctgtag atgtttcagc tgctgtacaa gggagtccca tttcagggtgt
60
ggggctgggc atggtcactc ctgctggatg tctggaaggt gaaaaccaag gacctagggg
120
aataccagggt acagcctttc cccgctcatc cagagcagga caaacaggcc aggtggtatc
180
aggagcccag gtctccagct ggaggggaatg tcaaccctgc agtgggagca ggggcccatc
240
acgcaccta ggcacagatg ctaatgcagg cactgcagggt aagctgggct tggatcctt
300
ccctggcttc agaaagaagc caacaaggag cgttttgcag aatgaaacct ttgtttccag
360
aagcactgct gactgtaagt ggttgccggt tgtggcagtg agcattttgt ccattctgag
420
gttggattgg tttctccttt tggccttgcc ctgccctaca gaccataaag gagaacagca
480
agaagcccc agcaaacatc cacagatggc cctggacatc agccacattc tgaggaacat
540
gtcatgttct gggaggggcta aggcataaag taaggcctgt ggggctggag gatcacaggg
600
caggtggggc aatccagagc catgggggct tcccatggga attgggaggt cccaaggcag
660
agtcagagggt tccacaggag gactcagaga gtcaccaagg gctctcctgg cccaggagc
720
agtcaacacc atggactgaa caccactggt gctccaacc ttggggccagg ctggggcatg
780
tggggccagg aggcagctca gactgggagg cagagagaga agtgtgttca gagggcaccc
840
atatctggat gtaatgtggt cctgagactc tggctgggaa gtgcttccag ggtttcatat
900
gtgttatgca gctacttctt ctcccccaacc ttaccgtgca ggaatcccag tgaatatgtt
960
gccaccatct tggagctcag tgccctcata gtgtaacagc accagcagat ctgectgtgc
1020
acagacttcc tgtactacct cactcctgag gggagatgct tctgcagggc ctgcgacctg
1080
gtgcacaact ttnnagacac catcatcctg gagcggcact gcaccctcac tagccagggt
1140
gttgatgact tcctcaatgc caaggccacg ttcaagattt tcgacttcag tgatgcgttt
1200
gtgctgagca aggtgggctt ctccgggatt ttagttcagg aggtagaatg cagcttgaga
1260
tcaagtgtct gatcaaataa cttgaacttg atctggagag ctctggggag ccatagaagt
1320
tggttgataa aggagggaca gtcgtatatg ttttagagat gactgtggaa ggctgcctgg
1380
aaggagtga caagagccag gagaccaggg agggagcttg tggggcagggt ctggagatga
1440
caaggagggt atcctgcttt gatgaaaggt cttcagggaa tgtctcagggt tacactcagg
1500

tgctctcaga gctagtgtgt tcaggggtct tgcctccagg atgaaaatga gaaggagtgt
1560
tcagacaaga acatataaat gaaggctggc atcttcgtga gtgccaatcg ttgtcctggt
1620
gtggactact gtgggaatag ggggtctctcc atccaggagc atggtggatg gaccctacat
1680
cactccattc tgccttctct ttccttccca ttctgagggc ctcagtgcga gggcgctgtc
1740
caacctctgg tgctgaagca gccgagagac ccaagcctgc cactcaggat atgacagcac
1800
agccagtggc ctctactgga tcctgtacaa cctcagaaga cacctagaca ctgggagtgc
1860
tgccaccacg tgggtgcaaga gttctgaggg accgcaattc tgaagacatt gaatgctgct
1920
tcctgtctcc tccatggacc tgcacagaat tgtcccatgt ttctgtttgt ttgggcacca
1980
ctgaggaagg aagcatgaag gacgcagagg tcaggccatt ctattgccct cctgtgctg
2040
ggtctttaat cctgagatgg cttcaggggc tggctcttct ccatggcccc ctccacatat
2100
ctcagccatt ttgcaaacc tggtcagaat gaaacattcc ttgggaactc gggccatgag
2160
aagcatcctt cctgaccacc tgactgcgga aacatcctta tcgcatectc cggggcgaag
2220
gccaacagc ctgactgcag gaacatcctt gccatatact gccgggcagc aagctctacc
2280
gcccagacc ctcttctcca gtcccatgat cgtcccgacc tgtgagcggc agttggtgat
2340
ggcactaagc tgatttctc ctctgcaggg ttttgctagt aataaagggtg ttgctgttga
2400
agcgtcaac tgtctttcta tgtctttctt taacccttgc cttgccttca aaatctaaca
2460
atagctctac ctctccattt taccaaggag gatatgagac tcaaggagag caagagactt
2520
accagaatt acacagccag tgagtcacag aacttgaact tgagctcagt tcagctgaat
2580
ccagaactca tgtcttctg agagtcagg gaaggaaagg tgggaactgca gccagtgggt
2640
cccacaggct tgtctagga gaccacatgc agactcctgg gaattgtgtc ctcttgggca
2700
caaaagaaga actgttcacc tgtgctgcat cagctaagtg tccccattgt cccaaattgt
2760
tatattttt caaagtttca ttttagtaac tagatttctc acagctcagt gttgaaaaca
2820
aagcacagag gcatatagaa a
2841

<210> 6198

<211> 124

<212> PRT

<213> Homo sapiens

<400> 6198

Met Gly Ala Ser His Gly Asn Trp Glu Val Pro Arg Gln Ser Gln Arg

```

      1             5             10             15
Phe His Arg Arg Ser Gln Arg Val Thr Lys Gly Ser Pro Gly Pro Gly
      20             25             30
Ser Ser Gln His His Gly Leu Asn Thr His Trp Ala Pro Thr Leu Gly
      35             40             45
Pro Gly Trp Gly Met Trp Gly Gln Glu Ala Ala Gln Ser Gly Arg Gln
      50             55             60
Arg Glu Lys Cys Val Gln Arg Ala Pro Ile Ser Gly Cys Asn Val Val
      65             70             75             80
Leu Arg Leu Trp Leu Gly Ser Ala Ser Arg Val Ser Tyr Val Leu Cys
      85             90             95
Ser Tyr Phe Leu Ser Pro Thr Leu Pro Cys Arg Asn Pro Ser Glu Tyr
      100             105             110
Val Ala Thr Ile Leu Glu Leu Ser Ala Leu Ile Val
      115             120

```

<210> 6199
 <211> 1777
 <212> DNA
 <213> Homo sapiens

<400> 6199
 ctgctttttcc cagcagtatt agtgtccccc aggcagggga ccttttccac attacatcac
 60
 tgccccatcc caccttacaa cactctggcc cctctgcttg gtcccccttt tccccaggca
 120
 ggaggcaatc ccaggggcct gcctgataga ggcatttctt gtccctgtct cctcctgcat
 180
 ctcttttatt ctgcactgcc accctctatt cccattctg tgttggactt tgaaggcccc
 240
 aagcccagcc aaagcactga gttccccctt aagacacctc cacacctcc ccacaagcaa
 300
 agcacaatt ttggggcca tgtagcatgg gccacgtagg aggtcctga cttgccaggg
 360
 gccagcctc agcatacca ccgaggcagc tgccagcctg ggctgagggt gggcatgagg
 420
 caggagtcag cacttgacc tagggatgtg aggttttctg tgccccaagt ttgtgggaag
 480
 gtgggcacta ctgctgggcc cacagacaca gccagctggc aaaaggagg tctagcccag
 540
 cagagagatg aggacatttt gcttctcctt catgcccaca gcatgagctg agcttctgct
 600
 ttgctggaaa tgaataaac ttggtatgaa ttgtccaag gcctccccag ttgtcatcct
 660
 gcctcttgtt gcctccctg tcttgcccc ccaccccaca cccatgcccc tgtttcctta
 720
 cagattttga tattgttcta atgtgtaata gaaccagccg agtccccctt tatcagaagg
 780
 gtctgaaaag cagcagcaca gtaggtga acacaggcct gcaagtgcga ccacctcaga
 840
 ccagtagct gtgcccacag tggacacact cacacctcca acaccccac gcgcaggcat
 900
 gtgtacagc atgtacacac gcatgcatgc acagccagat ggccactcag cacagatgtg
 960

gcagagggaa tggctgac ctgctgaaag ccattaagga gaaacgaatt tcccagtgcc
 1020
 cgggctgcaa gagagcctta taggggccct gtttctggg catgcgcttc ctctgccagc
 1080
 caacccccac ttgcccaagt cactgggtgca ataacttttc tgccttctc agagcagaga
 1140
 aattgggaat tgtgttaggt ggggtgtggc agctctgctg agccaagcag acacggatgt
 1200
 cccctcttct gggaggagg tagtgctccc aggcctcagg agtcagaca gagaccccca
 1260
 aagctgact gccacagaa accctctcct agtgaggggc aggtgggtgt gccnncagg
 1320
 tccccacacc cacagggagg cttcacacac tgcccagtac cggggatgcc aggaggcagg
 1380
 cccctctgct gctgccactg ctgccaacac tgcccagctt gtgaggccag gaggagcccc
 1440
 tgtccactc ggtgctgctg ctctctgac ccctgctgtg aggaatggga ttcttggtcg
 1500
 aaaaaattgg ttttctttt ttgtataaat gaaaagaatc caggagaagc tgccaccctc
 1560
 ccctccagc gtgatgcgt accttgettc ggctcttctg cgccctttcc gcctttggtc
 1620
 caggacagc ccagcagatc ctctgggtc tgacctggg ggtgtttgca tcacccctt
 1680
 ttacttgat taaaaaaaa tgatgggttg aaaatgtact gaggattaaa aatgtacttt
 1740
 tttataaata aagtgtttaa aaaaaaaaa aaaaaaa
 1777

<210> 6200

<211> 164

<212> PRT

<213> Homo sapiens

<400> 6200

Val	Gly	Val	Gly	Ser	Ser	Ala	Glu	Pro	Ser	Arg	His	Gly	Cys	Pro	Leu
1				5					10					15	
Phe	Trp	Glu	Glu	Gly	Ser	Ala	Pro	Arg	Pro	Gln	Glu	Ser	Arg	Gln	Arg
			20					25					30		
Pro	Pro	Lys	Pro	Asp	Cys	Gln	Gln	Lys	Pro	Ser	Pro	Ser	Glu	Gly	Gln
			35				40					45			
Val	Gly	Val	Pro	Xaa	Arg	Ser	Pro	His	Pro	Gln	Gly	Gly	Phe	Thr	His
			50			55				60					
Cys	Pro	Val	Pro	Gly	Met	Pro	Gly	Gly	Arg	Pro	Leu	Cys	Cys	Cys	His
65					70				75					80	
Cys	Cys	Gln	His	Cys	Pro	Ala	Cys	Glu	Ala	Arg	Arg	Ser	Pro	Cys	Pro
				85				90					95		
Thr	Arg	Cys	Cys	Cys	Ser	Ser	Asp	Pro	Cys	Cys	Glu	Glu	Trp	Asp	Ser
			100					105					110		
Trp	Ser	Lys	Lys	Leu	Val	Phe	Leu	Phe	Cys	Ile	Asn	Glu	Lys	Asn	Pro
			115				120					125			
Gly	Glu	Ala	Ala	Thr	Leu	Pro	Ser	Gln	Arg	Asp	Ala	Leu	Pro	Cys	Phe
			130				135				140				
Gly	Val	Leu	Ser	Pro	Phe	Pro	Pro	Leu	Val	Gln	Gly	Gln	Pro	Ser	Arg

145 150 155 160
 Ser Ser Trp Phe

<210> 6201
 <211> 604
 <212> DNA
 <213> Homo sapiens

<400> 6201
 acgcgtgggc atgtgcacgt gtgtgcctgt gcatgcgtga atatgcgtgt gtgtgcgtgc
 60
 tgtgctgagg acagcgtgag ttttcacaga agcaggtaaa aagtccaca ggaacagaga
 120
 ccaggacaag accagccctg atgggagaag ccaggaggacc cagaggaact tccaggaggc
 180
 ccttagctcc ctcagacaga atgcgggacg gcaatgccca gcaaagggca attcaaggac
 240
 agtggacgct ggggagagga gcagagtggg cagctctcag gagggcagga ctgcgaggct
 300
 gcaggagagga gttcggtggg aaggacagc ctcagagcct aagctgcgcc tcctgggaaa
 360
 ggggtatgac tggcaggcac acaaattgtc etcaaggaag gtgggcctgg ggccacagag
 420
 ctcccagagg agggagtgga gagggagagc ccgcagagga gagaccaggc agggctggcg
 480
 atcacgcagg tgcacagggt gaacgtcagg actgaaacgg aagacaatgt ccccatgcaa
 540
 gactggctga aacgaactca cacagaattt ttaagaggct cctgtgttgg gtgaaaaccg
 600
 gccg
 604

<210> 6202
 <211> 124
 <212> PRT
 <213> Homo sapiens

<400> 6202
 Met Gly Glu Ala Arg Gly Pro Arg Gly Thr Ser Arg Arg Pro Leu Ala
 1 5 10 15
 Pro Ser Asp Arg Met Arg Asp Arg Asn Ala Gln Gln Arg Ala Ile Gln
 20 25 30
 Gly Gln Trp Thr Leu Gly Arg Gly Ala Glu Trp Ala Ala Leu Arg Arg
 35 40 45
 Ala Gly Leu Arg Gly Cys Arg Glu Glu Phe Gly Gly Lys Gly Gln Pro
 50 55 60
 Gln Ser Leu Ser Cys Ala Ser Trp Glu Arg Gly Met Thr Gly Arg His
 65 70 75 80
 Thr Asn Val Ser Gln Gly Arg Trp Ala Trp Gly His Arg Ala Pro Arg
 85 90 95
 Gly Gly Ser Gly Glu Gly Glu Pro Ala Glu Glu Arg Pro Gly Arg Ala
 100 105 110
 Gly Asp His Ala Gly Ala Gln Gly Glu Arg Gln Asp

115

120

<210> 6203

<211> 3462

<212> DNA

<213> Homo sapiens

<400> 6203

nnaccgttgc ggccgcaggg gtctgggcag ggctgggcag tgctgccgga gcaaaagcgg
60
tagcgggagc ccggccggag ctgggtctgg agacgccgtg gcagcctgaa cggagtgtgc
120
gacggattgg gaggtttgtc tacagatttt gagcgttcga agttgacccc tgactaagta
180
tactttgctg ctcctcagc ctttgaaaaa atgtctgtca catatgatga ttccgttgga
240
gtagaagtgt ccagcgacag cttctgggag gtcgggaact acaagcggac tgtgaagcgg
300
atcgacgatg gccaccgcct gtgcagcgac ctcctgaact gcctgcatga gcgggcgcgc
360
atcgagaagg cgtatgcga gcagctcact gaggggccc ggcgtggag gcagctcgtg
420
gagaaagggc ccagtacgg gaccgtggag aaggcctgga tggccttcat gtccgaggca
480
gagaggggtga gcgagctgca cctcgagggtg aaggcctcac tgatgaacga tgacttcgag
540
aagatcaaga actggcagaa ggaagccttt cacaagcaga tgatgggcgg cttcaaggag
600
accaaggaag ctgaggacgg ctttcggaag gcacagaagc cctggggcaa gaagctgaaa
660
gaggtagaag cagcaaagaa agcccacat gcagcgtgca aagaggagaa gctggctatc
720
tcacgagaag ccaacagcaa ggcagacca tccctcaacc ctgaacagct caagaaattg
780
caagacaaaa tagaaaagtg caagcaagat gttcttaaga ccaaagagaa gtatgagaag
840
tccctgaagg aactcgacca gggcacaccc cagtacatgg agaacatgga gcagggtgtt
900
gagcagtgcc agcagttcga ggagaaacgc cttcgcttct tccgggaggt tctgctggag
960
gttcagaagc acctagacct gtccaatgtg gctggctaca aagccattta ccatgacctg
1020
gagcagagca tcagagcagc tgatgcagtg gaggacctga ggtggttccg agccaatcac
1080
gggccgggca tggccatgaa ctggccgcag tttgaggagt ggtccgcaga cctgaatcga
1140
accctcagcc ggagagagaa gaagaaggcc actgacggcg tcaccctgac gggcatcaac
1200
cagacaggcg accagtctct gccagtaag cccagcagca cccttaatgt cccgagcaac
1260
cccgccagc ctgctcagtc acagtccagc tacaacctt tcgaggatga ggacgacag
1320
ggcagcaccc tcagtgagaa ggacgacact aaggccaaaa atgtgagcag ctacgagaag
1380

accagagct atcccaccga ctggtcagac gatgagtcta acaacccctt ctctccacg
1440
gatgccaatg gggactcgaa tccattcgac gacgacgcca cctcggggac ggaagtgcga
1500
gtccggggccc tgtatgacta tgaggggcag gagcatgatg agctgagctt caaggctggg
1560
gatgagctga ccaagatgga ggacgaggat gagcagggct ggtgcaaggg acgcttggac
1620
aacgggcaag ttggcctata cccggcaaat tatgtggagg cgatccagtg atgagtcggg
1680
gacagggccag cggggggacg gaggcggcgg gccagggagc ctacagccagc cacgtgggca
1740
tccactcctt ttctgcaag agatgatggt tccattgctc ttggcttcat ggtgttcctg
1800
gaaggcagat gagetggta tttcgcttg gactcggcac ctttcagagt gcagctggag
1860
ggatctgagc gcaggaagac gcagaacaac agaaatagcc gccctcccc gccactgtg
1920
cctgttgcc tatcatagat ctctatgttc ttgactttgt ctctccttcc cgagtcaatg
1980
gtgggttaca ctgatcttgt tccactgatt actctctctg acgagtccat cacctgcaac
2040
ttaaataaac aagcttacat cccattttga gtgaagattt tgaggttttt aatttaaagg
2100
ctgtgtacag ttatactttt ttatacacct gttcatttct acttaaaatta tggcacagat
2160
tgatgcgcac cagtcttgag gaaacgatct ccctattccc ttaccctgtt actcagccac
2220
gccgtgtgta ggcttagcct cagggtggcag atgtttgagg aaaggaatta tgccaggaag
2280
gtgggaccgg gttatggctg ggtttctatt gggaatgtc tttgtgctt tgggcatctg
2340
aatggaagct ttacatagaa ccttaggtag aactccccc aatcgccata tttaaaaatt
2400
attttcactc tattcttgtt taaaactgta ctcttttgca aattaacaat tttatcactg
2460
attcagagtt aaaaagaaga ctaacttttc aagcaaatgc atctgtaaag atgctttaga
2520
ttagactgtc atgtctcagt gtctatctgt atatattatt tgatattcag agaactctaa
2580
gcactcgtct actgttttaa tgagatttaa cagcttttaa cagtgagttt cgtttgtaa
2640
ctgcttgaag tctgtggcat tcaggcacac atctggctgg ccggtgggt ctctcccgg
2700
gtcagtgagg cctggggcct ctctgacgtg gtgctgctg gaggagggt cgtcgtcacc
2760
agctgactgc tggccggct tctgacggc ctttgcctg gctccgtagc agaacactgt
2820
aaaagtgcc gcgtcttgc agtagttgca gatttcagtc gtcgtgttac ttgtgcacaa
2880
acagaagctg ggtcttacc gcagcacgag tgtctcgggc tgcccggagt cggccgggag
2940
caggtgctgc agccagagtt acgcgggggc cacgcgggccc ggcgggggtg gggggaacgt
3000

gggggaacct gtgtttcacg tgactcagca gtgcccgcg ccgtcaccag ctatgcattc
 3060
 actccgtttc cagtgcagcag atgtcttget tggaaagtgg acctgtgtct gtgtctgtcc
 3120
 tgagaactta ccagcagaaa tcctcatttc tgtgctacgg atttaccaaa aattgtcaag
 3180
 tctttttcag tttaacagtt cctttacatg tgtagtattt gaggaaaaaa atcaataaac
 3240
 agttgatctc gtgcatatgg aagtcctctc gccatcatct gtcttcatgc ccacttcact
 3300
 tggcggggggt ggcctccctg gggcttacta gctttggagc tgggcaagat ccagggcaca
 3360
 ggacccctgc caaaaggcc acggccact gccctgcc aactggaggt tggggatttg
 3420
 aggcacctga gccccttggg gtcccttct ccccgagacc tg
 3462

<210> 6204

<211> 486

<212> PRT

<213> Homo sapiens

<400> 6204

Met	Ser	Val	Thr	Tyr	Asp	Asp	Ser	Val	Gly	Val	Glu	Val	Ser	Ser	Asp
1				5					10					15	
Ser	Phe	Trp	Glu	Val	Gly	Asn	Tyr	Lys	Arg	Thr	Val	Lys	Arg	Ile	Asp
			20					25					30		
Asp	Gly	His	Arg	Leu	Cys	Ser	Asp	Leu	Met	Asn	Cys	Leu	His	Glu	Arg
		35					40					45			
Ala	Arg	Ile	Glu	Lys	Ala	Tyr	Ala	Gln	Gln	Leu	Thr	Glu	Trp	Ala	Arg
		50				55					60				
Arg	Trp	Arg	Gln	Leu	Val	Glu	Lys	Gly	Pro	Gln	Tyr	Gly	Thr	Val	Glu
65				70					75					80	
Lys	Ala	Trp	Met	Ala	Phe	Met	Ser	Glu	Ala	Glu	Arg	Val	Ser	Glu	Leu
			85					90					95		
His	Leu	Glu	Val	Lys	Ala	Ser	Leu	Met	Asn	Asp	Asp	Phe	Glu	Lys	Ile
			100					105					110		
Lys	Asn	Trp	Gln	Lys	Glu	Ala	Phe	His	Lys	Gln	Met	Met	Gly	Gly	Phe
		115					120					125			
Lys	Glu	Thr	Lys	Glu	Ala	Glu	Asp	Gly	Phe	Arg	Lys	Ala	Gln	Lys	Pro
		130				135					140				
Trp	Ala	Lys	Lys	Leu	Lys	Glu	Val	Glu	Ala	Ala	Lys	Lys	Ala	His	His
145				150					155					160	
Ala	Ala	Cys	Lys	Glu	Glu	Lys	Leu	Ala	Ile	Ser	Arg	Glu	Ala	Asn	Ser
			165					170					175		
Lys	Ala	Asp	Pro	Ser	Leu	Asn	Pro	Glu	Gln	Leu	Lys	Lys	Leu	Gln	Asp
		180					185						190		
Lys	Ile	Glu	Lys	Cys	Lys	Gln	Asp	Val	Leu	Lys	Thr	Lys	Glu	Lys	Tyr
	195					200					205				
Glu	Lys	Ser	Leu	Lys	Glu	Leu	Asp	Gln	Gly	Thr	Pro	Gln	Tyr	Met	Glu
	210					215					220				
Asn	Met	Glu	Gln	Val	Phe	Glu	Gln	Cys	Gln	Gln	Phe	Glu	Glu	Lys	Arg
225				230					235					240	
Leu	Arg	Phe	Phe	Arg	Glu	Val	Leu	Leu	Glu	Val	Gln	Lys	His	Leu	Asp

245 250 255
 Leu Ser Asn Val Ala Gly Tyr Lys Ala Ile Tyr His Asp Leu Glu Gln
 260 265 270
 Ser Ile Arg Ala Ala Asp Ala Val Glu Asp Leu Arg Trp Phe Arg Ala
 275 280 285
 Asn His Gly Pro Gly Met Ala Met Asn Trp Pro Gln Phe Glu Glu Trp
 290 295 300
 Ser Ala Asp Leu Asn Arg Thr Leu Ser Arg Arg Glu Lys Lys Lys Ala
 305 310 315 320
 Thr Asp Gly Val Thr Leu Thr Gly Ile Asn Gln Thr Gly Asp Gln Ser
 325 330 335
 Leu Pro Ser Lys Pro Ser Ser Thr Leu Asn Val Pro Ser Asn Pro Ala
 340 345 350
 Gln Ser Ala Gln Ser Gln Ser Ser Tyr Asn Pro Phe Glu Asp Glu Asp
 355 360 365
 Asp Thr Gly Ser Thr Val Ser Glu Lys Asp Asp Thr Lys Ala Lys Asn
 370 375 380
 Val Ser Ser Tyr Glu Lys Thr Gln Ser Tyr Pro Thr Asp Trp Ser Asp
 385 390 395 400
 Asp Glu Ser Asn Asn Pro Phe Ser Ser Thr Asp Ala Asn Gly Asp Ser
 405 410 415
 Asn Pro Phe Asp Asp Asp Ala Thr Ser Gly Thr Glu Val Arg Val Arg
 420 425 430
 Ala Leu Tyr Asp Tyr Glu Gly Gln Glu His Asp Glu Leu Ser Phe Lys
 435 440 445
 Ala Gly Asp Glu Leu Thr Lys Met Glu Asp Glu Asp Glu Gln Gly Trp
 450 455 460
 Cys Lys Gly Arg Leu Asp Asn Gly Gln Val Gly Leu Tyr Pro Ala Asn
 465 470 475 480
 Tyr Val Glu Ala Ile Gln
 485

<210> 6205

<211> 926

<212> DNA

<213> Homo sapiens

<400> 6205

nngcgctcc canagagaat agggcccgag ttcaatggag gctgtggaga gatggagaag
 60
 tgggggtgaag attttggaga atctcggggg agagcaaggg aagggaagga gtttgccgac
 120
 agccagaagt tgctgttcat ggaaacttcg gccaaactga accaccaggt gtcggaggtg
 180
 ttcaatacag tggcccaaga gctactgcag agaagcgacg aggagggcca ggctctacng
 240
 ggggaagaca cccctgcct gggccatggc cagctctagg tggattctga ttcactgtca
 300
 atgctgggtt gctcccgagc cctagatgtt cctggaagtt ggcccccttt atgaaaacca
 360
 ctcccacag ccagtgggaa ctgccagagg aagatctggc gtcacatggc tcccaggaaa
 420
 gtgctgtgcc ctatcccccac tgataaccatc tgattccccc atgectgtgc ctgttcacc
 480

tggacgggtgg cccctcagc ctggcagcct ctggacagag aggaaggaag gattggaaaa
 540
 gtccccgcag cacagcgacg gtgggaagat gccttacgtc tgatcttgat gggggcactg
 600
 gcctggagcc tggggccacc tgcctctggg ggggtgggga gcaggccaga tggaggtggt
 660
 ggtgccagga agaaatggag cgatgactga ctgtggggtg ggcccaggat ttccgcactc
 720
 tgggtgaagtt gcccctggga agggcagctg ggggcagtg ggcagttcc cttccatggt
 780
 ctcccggctg gcaatgtggt gaagctgagt ttctgtccaa tgagcaggaa gattctgaga
 840
 catttcgcct gagatataag ttgtactgcg tatgcagttt ttctccaaa aattaaattg
 900
 cttttgacaa tctgaaaaaa aaaaaa
 926

<210> 6206

<211> 92

<212> PRT

<213> Homo sapiens

<400> 6206

Xaa	Arg	Leu	Pro	Xaa	Arg	Ile	Gly	Pro	Ser	Phe	Asn	Gly	Gly	Cys	Gly
1				5				10					15		
Glu	Met	Glu	Lys	Trp	Gly	Glu	Asp	Phe	Gly	Glu	Ser	Arg	Gly	Arg	Ala
			20					25					30		
Arg	Glu	Gly	Lys	Glu	Phe	Ala	Asp	Ser	Gln	Lys	Leu	Leu	Phe	Met	Glu
		35					40						45		
Thr	Ser	Ala	Lys	Leu	Asn	His	Gln	Val	Ser	Glu	Val	Phe	Asn	Thr	Val
		50				55					60				
Ala	Gln	Glu	Leu	Leu	Gln	Arg	Ser	Asp	Glu	Glu	Gly	Gln	Ala	Leu	Xaa
65					70					75					80
Gly	Glu	Asp	Thr	Pro	Cys	Leu	Gly	His	Gly	Gln	Leu				
				85						90					

<210> 6207

<211> 1384

<212> DNA

<213> Homo sapiens

<400> 6207

nntgatcaga ggtcctgggt gtctggggaa gctgggctgt gcgtgtatgc gtctaccatg
 60
 tgggggtgcc tgtgagtgtg ctggggcgctc tgcagtgaag gcctcctgag accactccac
 120
 ggaaacaccg ggaatccctg cagctgagcc tgtctctcac gggaccggga agctggagag
 180
 agccccaacc ctgcccgctg gggccgagct ccctgtctct gcagcagtc cgtgccccac
 240
 actctgagtc tgcctatacc acagctgctg ggctctctg tggccaccat ggtgactctt
 300
 acctacttcg gggcccactt tgcgtgtcatc cgccgagcgt ccctggagaa gaaccgctac
 360

caggctgtgc accaatgggc cttctctgcg gggttgagcc tggtagggcct cctgactctg
 420
 ggagccgtgc tgagcgctgc agccaccgtg agggaggccc agggcctcat ggcagggggc
 480
 ttctgtgct tctccctggc gttctgygca cagggtgcagg tgggtgtctg gagactccac
 540
 agccccaccc aggtggagga cgccatgctg gacacctacg acctggtata tgagcaggcg
 600
 atgaaaggta cgtccacagt ccggcggcag gagctggcgg ccatccagga cgtgtttctg
 660
 tgctgtggga agaagtctcc ttccagccgt ctggggagca cagaggctga cctgtgtcag
 720
 ggagaggagg cggcgagaga ggactgcctt cagggcaccc ggagcttctt gaggacacac
 780
 cagcaggctg cctccagcct gaccagcatc ggcttgcccc tcacggtgac cgccttgctc
 840
 ttccagctct tctgtgggtt tgccatccgc tgtggctgca gcttggaacc caagggcaaa
 900
 tacacctga cccacagagc atgtggcgc cagccccagg agcccagcct cttgagatgc
 960
 tcccagggtg gaccacacac ttgtctccac tccgaagcag ttgctattgg tccaagagga
 1020
 tgctcgggta gtcttcgggt gctgcaggag agcgatgctg cgcctctgcc cctctcctgc
 1080
 cacctggctg cccacagagc tctccagggc agaagtcgcg gtgggctcag tgggtgcctt
 1140
 gagcggggtc tctcagactg acgtcaggcc ttggtgggct gcactctcac ctggaggctc
 1200
 cggggaagca tctgcctcca ggaccattca ggctgttgac aagtcaactc ctcatggctg
 1260
 taggactgag gttcccaagt cctgtctcct ggtcctgtgg tcctccacc ttcaaaccag
 1320
 caatggtgca ttgagcaaat tgtggtcaaa tatacatcac atcaaattta ccatcttaaa
 1380
 aaaa
 1384

<210> 6208

<211> 290

<212> PRT

<213> Homo sapiens

<400> 6208

Met Val Thr Leu Thr Tyr Phe Gly Ala His Phe Ala Val Ile Arg Arg
 1 5 10 15
 Ala Ser Leu Glu Lys Asn Pro Tyr Gln Ala Val His Gln Trp Ala Phe
 20 25 30
 Ser Ala Gly Leu Ser Leu Val Gly Leu Leu Thr Leu Gly Ala Val Leu
 35 40 45
 Ser Ala Ala Thr Val Arg Glu Ala Gln Gly Leu Met Ala Gly Gly
 50 55 60
 Phe Leu Cys Phe Ser Leu Ala Phe Xaa Ala Gln Val Gln Val Val Phe
 65 70 75 80
 Trp Arg Leu His Ser Pro Thr Gln Val Glu Asp Ala Met Leu Asp Thr

```

      85      90      95
Tyr Asp Leu Val Tyr Glu Gln Ala Met Lys Gly Thr Ser His Val Arg
      100      105      110
Arg Gln Glu Leu Ala Ala Ile Gln Asp Val Phe Leu Cys Cys Gly Lys
      115      120      125
Lys Ser Pro Phe Ser Arg Leu Gly Ser Thr Glu Ala Asp Leu Cys Gln
      130      135      140
Gly Glu Glu Ala Ala Arg Glu Asp Cys Leu Gln Gly Ile Arg Ser Phe
145      150      155      160
Leu Arg Thr His Gln Gln Val Ala Ser Ser Leu Thr Ser Ile Gly Leu
      165      170      175
Ala Leu Thr Val Ser Ala Leu Leu Phe Ser Ser Phe Leu Trp Phe Ala
      180      185      190
Ile Arg Cys Gly Cys Ser Leu Asp Arg Lys Gly Lys Tyr Thr Leu Thr
      195      200      205
Pro Arg Ala Cys Gly Arg Gln Pro Gln Glu Pro Ser Leu Leu Arg Cys
      210      215      220
Ser Gln Gly Gly Pro Thr His Cys Leu His Ser Glu Ala Val Ala Ile
225      230      235      240
Gly Pro Arg Gly Cys Ser Gly Ser Leu Arg Trp Leu Gln Glu Ser Asp
      245      250      255
Ala Ala Pro Leu Pro Leu Ser Cys His Leu Ala Ala His Arg Ala Leu
      260      265      270
Gln Gly Arg Ser Arg Gly Gly Leu Ser Gly Cys Pro Glu Arg Gly Leu
      275      280      285
Ser Asp
      290

```

<210> 6209

<211> 2269

<212> DNA

<213> Homo sapiens

<400> 6209

```

ggcaggctgg gaattagcca gcaaagatgc cgatgaggtc atcaagcaga aggaaatctc
60
accacacca ggtggactta caaggctgtg tgtgccctgg gcagggtgga catgtccagg
120
gcgggggaaac cctggatatt tcaactctgaa gtggtttctt gaaagaaaac tcaactgact
180
caggccatga gcattcttta cactgaagca agcatctect cacaagtgcc tcctacaagt
240
cactagagtc atattcaaca ttacaaaatg cagtgtact taaattttaa agcactgagg
300
gaccaagaaa tgggctgac aagtccttgg ccactcactg ttaagagcca ggatttacag
360
atcaatgact gttcctattg tccaagaaat aattttctag caaagcatac acactttatt
420
aaatttcaca gccagcagcg ctttcagtcc acaacagatt tctcagagga aacatggata
480
ttttgcgtag gcagaaacag tgaggagtac aaagcaaagc tataaatacc accaatgggt
540
ctgctatgtg catccgatat tttttgcccg atctgaaata ctgcaagggc ttaaccattc
600

```

aaacaccgca tgacaacgaa cccagtgagc tgtgaaactc aggetgcagg aggggtggctt
660
gtcagctggg gaagccactt ggctttggac tccatcgggc atctttacgc aagagcagag
720
atgaacgggtg ggtcacggct atgacgtgaa ggagaaagag aagacacact cacagaacag
780
gatggagagc ttcaataatt ttttaaaagc ttggaaccac cacctgcttt cccaatcttg
840
ggctgggggtt ttgacttttc ttgatcatca atctgacttg aagcctttta ccagttacaa
900
tacagacatg gccagatgac ctgcttggtta ggaaggctgt ggccatcttt gtttctgaaa
960
cagtcttate tcactgtgac actgctgctc tgggaagggtc aggaccagca ctgcagacac
1020
tcggccatgc tgtgagttag cccagacata cgcgtggaat ctgaacaccc aacgctggcg
1080
ttcccggtgc agtctgaggg ctgcggctcc agcgtctgtc cacacacacg cctgcctctc
1140
tctagtccct ccactgctcg gcttctctgc ttgcaaaacc cagcatgtga aatgaggaca
1200
cctccaagga gacccttccg agcagggagg tttcatcaca cctttcgttc ttgccaagga
1260
gtctatcgcc tcattccaaa catctgcttg cgggagaaac agcaaatgtg tccctctgag
1320
ggaaggactg aggagggctt tggtagtcac agattgagac acatttctgc gaaaactggt
1380
attatgtttc tgcacaggaa aacaaagtgt taaaaatatt cccatcctcc ctccaactcc
1440
cttctgtcac acagtcccaa gtgaacttga aaaaggtcca gaagtgaaca cttaggggtg
1500
atttaccttt ctctgaaga tgggaagaca cacggatgct tgcctaaaat atctgccgag
1560
aggtgagcag ctgtggcctg ggaaggcgct tgccttctcc ccacatcagc cagaaggcag
1620
atcacacctt cagagcacc caccagaacc agatggcgaa tcaaagtga gaaaaagaac
1680
accgcttcc tcattagtca tttaggaaga taagatagca tgggacaggg agaacaacca
1740
tgttctgaat ggagactttt tcaggttccc aaacttggga cagtgagtgt gacccacat
1800
cctgtggttt ctgctgacc cttctaagcc agaggtgaga aaacaactcc cagagaccac
1860
gactctcacc ctggaggta cctgttcccc tgcaggtgtg gctctctgac aaccctagg
1920
caggggtggg ctccagcttt tggagcaac cctacctagc tggccccca agcattaaga
1980
agcttccctg atggggccat gttttggtct ccttttaagc cctcagtcac aatgtacctt
2040
ctgagcttgt cctactatcc agatgatttt ctctctgagt tgcaatactg ctcaatttag
2100
gtggctacct gtgttcattc aagctctgga agtggtgaag ggaacttaat cattgagttt
2160
ctgtgaagta ttttgccatc ctaaaatccc tgagagtga actgttgaat catgctcact
2220

ttcttcacat acatactctt ggactatggg gaccaagtct gttgaattc
2269

<210> 6210

<211> 165

<212> PRT

<213> Homo sapiens

<400> 6210

Met	Gly	Ile	Phe	Leu	Thr	Leu	Cys	Phe	Pro	Val	Gln	Lys	His	Asn	Thr
1			5					10					15		
Ser	Phe	Arg	Arg	Asn	Val	Ser	Gln	Ser	Val	Thr	Thr	Lys	Ala	Leu	Leu
		20					25					30			
Ser	Pro	Ser	Leu	Arg	Gly	Thr	His	Leu	Leu	Phe	Leu	Pro	Gln	Ala	Asp
	35					40					45				
Val	Val	Asp	Glu	Ala	Ile	Asp	Ser	Leu	Ala	Arg	Thr	Lys	Gly	Val	Met
50					55					60					
Lys	Pro	Pro	Cys	Ser	Glu	Gly	Ser	Pro	Trp	Arg	Cys	Pro	His	Phe	Thr
65				70					75					80	
Cys	Trp	Val	Leu	Gln	Ala	Arg	Lys	Pro	Gly	Ser	Gly	Gly	Thr	Arg	Glu
			85					90					95		
Arg	Gln	Ala	Cys	Val	Trp	Thr	Ser	Ala	Gly	Ala	Ala	Ala	Leu	Arg	Leu
		100					105						110		
Ala	Arg	Glu	Arg	Gln	Arg	Trp	Val	Phe	Arg	Phe	His	Ala	Tyr	Val	Trp
	115					120					125				
Ala	His	Ser	Gln	His	Gly	Arg	Val	Ser	Ala	Val	Leu	Val	Leu	Thr	Leu
	130				135				140						
Pro	Glu	Gln	Gln	Trp	Thr	Asp	Glu	Ile	Arg	Leu	Phe	Gln	Lys	Gln	Arg
145				150					155					160	
Trp	Pro	Gln	Pro	Ser											
			165												

<210> 6211

<211> 2163

<212> DNA

<213> Homo sapiens

<400> 6211

ngccgcccgc ctcagcccaa catggcgatg cacaacaagg cggcgccgcc gcagatcccc
60
gacacccggc gggagctggc ggagctcgtg aaggggaagc aggagctggc ggaacattg
120
gcaaatttgg agcgacagat ctatgctttt gaggaagct acctggaaga cactcagatg
180
tatggcaata ttattcgtgg ctgngatcg gtatctgacc aaccannaaa aaactccaat
240
agcaaaaatg atcgaaggaa ccggaagttt aaggaagctg agcggtctt cagtaaatcc
300
tcggttacct cagcagctgc agtaagtga ttggcaggag ttcaggacca gctcattgaa
360
aagagggagc caggaagtgg gacggaaagt gacacttctc cagacttcca caatcaggaa
420
aatgagccca gccaggagga ccctgaggat ctggatggat ctgtgcaggg agtgaaacct
480

cagaaggctg cttctttctac ttcctcaggg agtcaccaca gcagccataa aaagcgaaag
540
aataaaaaacc ggcacagccc gtctggcatg tttgattatg actttgagat tgatctgaag
600
ttaaacaaaa aaccacgagc tgactattag aagacacatt agtgcagaag cttccaggct
660
gtagagccct gcttcccttc tctgacctca caaagataaa catccttcac ctgagttcgt
720
ggccatccac ctctgctctc ccagaccag tgccctgtgac tttgagtagt ttgttctaaa
780
tgtggtgaca aacaagtcac ttctgtaaga cattgggtct tactttatgt gatttttagt
840
aacagaactg caggaagatc aagacaatgt tgtaatcccg gcaagttgct aactgtgcgt
900
ttctcccttc ttagaatgaa tgtctccccc aaaactggct ggcaccagct tcatctgtga
960
tacccttcaa gaaatgttct ctggttttgt tttatgctga aagtagaaca caagtccacat
1020
ttcagatgga ggetgtaaat atctggcatt ttcttatatt gttttatggt ttcttggttt
1080
tctctgttg tttttatctt attttctttg gggttttttt gtaatgcctt tgtaacagctc
1140
atactttcct gctgacatat ctgatcatct ctttcatgca gttgccataa ttcatcaactg
1200
aaaataatct ggtttatcat aagtaaaatg ggaaacttgc ctctgttttt tgcaagggga
1260
ggtaaaagat gtttagtaat tacctatctt aaatctttct gagttggtag tagattcatg
1320
ttcaaggaac aggaaaaatg gaaaaacata agtttaaatc agttcttttt aaataacttt
1380
ttattctttt gtataaataa aatttcacag gtttcaaatt ctcatgcttt actttttaaac
1440
ccgagattgt ttttttcaact tatttatcca tatcatgcct tatggaaatt tctttttctg
1500
tattttctct ctttgctggg attcacctga ttaaatattg ctctaaaaat caccatggca
1560
tatggaaagt ctcaaaatta taccaaaagt gataacttat gtcgttctta agtggagtga
1620
aaggatagca tcagtgatag ccagtgttgc ccaccaggtc tccctttctt ggagggttg
1680
ttggggctga ggaatctgct agtaatcggt acctgcctct agtgctgtgg tgaaacttgcg
1740
acagggtctg gctgcacatt ggaatcacct gagaagcttt aaaataactca tgcctggatc
1800
ccatccctag agactggggg acagcctagt tattgggaat ttctttaaaa gagttcctgg
1860
gattctgata agaagccagg ttgagaacca ctacattaga agactgaatg gtttaattta
1920
catcctatgt tatgattggg ccaagggata agatttgggg tctaactttt cttttcactc
1980
tagttagtca tagtccttga cttatgccta tatctttgta agaaatagta tgtttcattt
2040
gtgatagtat tggtagggct gaatatggat ggcacttact gtaaaacaag tctaacttgt
2100

cagatgtgca aaagctttca ctcttgttct caaataaaact tttgtgggtt tttttaaaaa
2160

aaa

2163

<210> 6212

<211> 209

<212> PRT

<213> Homo sapiens

<400> 6212

Xaa Arg Pro Pro Gln Pro Asn Met Ala Met His Asn Lys Ala Ala Pro
1 5 10 15
Pro Gln Ile Pro Asp Thr Arg Arg Glu Leu Ala Glu Leu Val Lys Gly
20 25 30
Lys Gln Glu Leu Ala Glu Thr Leu Ala Asn Leu Glu Arg Gln Ile Tyr
35 40 45
Ala Phe Glu Gly Ser Tyr Leu Glu Asp Thr Gln Met Tyr Gly Asn Ile
50 55 60
Ile Arg Gly Trp Xaa Ser Val Ser Asp Gln Pro Xaa Lys Asn Ser Asn
65 70 75 80
Ser Lys Asn Asp Arg Arg Asn Arg Lys Phe Lys Glu Ala Glu Arg Leu
85 90 95
Phe Ser Lys Ser Ser Val Thr Ser Ala Ala Val Ser Ala Leu Ala
100 105 110
Gly Val Gln Asp Gln Leu Ile Glu Lys Arg Glu Pro Gly Ser Gly Thr
115 120 125
Glu Ser Asp Thr Ser Pro Asp Phe His Asn Gln Glu Asn Glu Pro Ser
130 135 140
Gln Glu Asp Pro Glu Asp Leu Asp Gly Ser Val Gln Gly Val Lys Pro
145 150 155 160
Gln Lys Ala Ala Ser Ser Thr Ser Ser Gly Ser His His Ser Ser His
165 170 175
Lys Lys Arg Lys Asn Lys Asn Arg His Ser Pro Ser Gly Met Phe Asp
180 185 190
Tyr Asp Phe Glu Ile Asp Leu Lys Leu Asn Lys Lys Pro Arg Ala Asp
195 200 205
Tyr

<210> 6213

<211> 1160

<212> DNA

<213> Homo sapiens

<400> 6213

acgcgtgaag ggaaggggaa agaggtcacc aagggcagag gtgtccaggc cggagccagg
60
ggccccactg ttgggatgct ggctgcagtg gggcgcccca agcccaggtc cctctgtct
120
tctcttttga ctttgcagct gtacttgttt tgctcctcta cccgcaggag ctgacatgga
180
cccaaatect cgggcccgcc tggagcgcca gcagctccgc cttcggggagc ggcaaaaatt
240

cttcgaggac attttacagc cagagacaga gtttgtcttt cctctgtccc atctgcatct
 300
 cgagtcgcag agacccccca taggtagtat ctcacccatg gaagtgaatg tggacacact
 360
 ggagcaagta gaacttattg accttgggga cccggatgca gcagatgtgt tcttgccctg
 420
 cgaagatcct ccaccaaccc cccagtcgtc tgggggtggac aaccatttgg aggagctgag
 480
 cctgccnggt gcctacatca gacaggacca catctaggac ctctcctcc tctcctccg
 540
 actcctccac caacctgcat agcccaaadc caagtgatga tggagcagat acgcccttgg
 600
 cacagtcgga tgaagaggag gaaaggggtg atggaggggc agagcctgga gcctgcagct
 660
 agcagtgggc cctgcctac agactgacca cgctggctat tctccacatg agaccacagg
 720
 cccagccaga gcctgtcggg agaagaccag actctttact tgcagtaggc accagagggtg
 780
 ggaaggatgg tgggattgtg tacctttcta agaattaacc ctctcctgct ttactgctaa
 840
 ttttttcttg ctgcaaccct cccaccagtt tttggcttac tctgagata tgatttgcaa
 900
 atgaggagag agaagatgag gttggacaag atgccactgc ttttcttagc actcttcctt
 960
 cccctaaacc atcccgtagt cttctaatac agtctctcag acaagtgtct ctatagggat
 1020
 gtgaactcct taactcatca agtaagggtg tactcaagcc atgctgcctc cttacatcct
 1080
 ttttgggaaca gagcacggta taaataataa actaataata atatgccaac aaaaaaaaaa
 1140
 aaaaaaaaaa aaaaaaaaaa
 1160

<210> 6214

<211> 101

<212> PRT

<213> Homo sapiens

<400> 6214

Pro Trp Gly Pro Gly Cys Ser Arg Cys Val Leu Ala Leu Arg Arg Ser
 1 5 10 15
 Ser Thr Asn Pro Pro Val Val Trp Gly Gly Gln Pro Phe Gly Gly Ala
 20 25 30
 Glu Pro Ala Xaa Cys Leu His Gln Thr Gly Pro His Leu Gly Pro Pro
 35 40 45
 Pro Pro Pro Pro Pro Thr Pro Pro Pro Thr Cys Ile Ala Gln Ile Gln
 50 55 60
 Val Met Met Glu Gln Ile Arg Pro Trp His Ser Arg Met Lys Arg Arg
 65 70 75 80
 Lys Gly Val Met Glu Gly Gln Ser Leu Glu Pro Ala Ala Ser Ser Gly
 85 90 95
 Pro Leu Pro Thr Asp
 100

<210> 6215
 <211> 651
 <212> DNA
 <213> Homo sapiens

<400> 6215
 ncagctccat aatccccctcc agaacattct gcaacagccc catgatcccc tctagaacat
 60
 tccacaatag cctcacaggt cccctgtaga acattccacc acagccccc atgcccccttg
 120
 ctctcagag catgtggccg ccagccccag gagcccagcc tcttgagatg ctcccaggg
 180
 ggaccacac attgtctcca ctccgaagca gttgctattg gtccaagagg atgctcgggt
 240
 agtcttcggt ggctgcagga gagcgatgct gcgcctctgc cctctcctg ccacctgggt
 300
 gccacagag ctctccaggg cagaagtcgc ggtgggtcca gtgggtgccc tgagcgggg
 360
 ctctcagact gacgtcaggc cttgggtggc tgcactctca cctggaggct cgggggaagc
 420
 atctgcctcc aggaccattc aggtgttga caagtcaact cctcatgggt gtaggactga
 480
 ggttcccaag tccttgctcc tggctctgtg gtcctccac cttcaaacca gcaatggtgc
 540
 attgagcaaa ttgtggtcaa atatacatca catcaaattt accatcttaa ccattgttaa
 600
 gtgtatgggt tgtggcatta aatacattca cattgttgtg caaccatcac c
 651

<210> 6216
 <211> 87
 <212> PRT
 <213> Homo sapiens

<400> 6216
 Met Ile Pro Leu Leu Leu Arg Ala Cys Gly Arg Gln Pro Gln Glu Pro
 1 5 10 15
 Ser Leu Leu Arg Cys Ser Gln Gly Gly Pro Thr His Cys Leu His Ser
 20 25 30
 Glu Ala Val Ala Ile Gly Pro Arg Gly Cys Ser Gly Ser Leu Arg Trp
 35 40 45
 Leu Gln Glu Ser Asp Ala Ala Pro Leu Pro Leu Ser Cys His Leu Ala
 50 55 60
 Ala His Arg Ala Leu Gln Gly Arg Ser Arg Gly Gly Leu Ser Gly Cys
 65 70 75 80
 Pro Glu Arg Gly Leu Ser Asp
 85

<210> 6217
 <211> 2955
 <212> DNA
 <213> Homo sapiens

<400> 6217

ngcagcgggg aggcgggagc cgcgggcgga gccgcccggc gaggcgtggg ggctgcgggg
60
ccggcccatc cgtgggggcg acttgagcgt tgagggcgcg cggggaggcg agccaccatg
120
ttcagccagc agcagcagca gcagctccag caacagcagc agcagctcca gcagttacag
180
cagcagcagc tccagcagca gcaattgcag cagcagcagt tactgcagct ccagcagctg
240
ctccagcagt ccccaccaca ggccccgttg cccatggctg tcagccgggg gctccccccg
300
cagcagccac agcagccgct tetgaatctc cagggcacca actcagcctc cctcctcaac
360
ggctccatgc tgcagagagc tttgctttta cagcagttgc aaggactgga ccagtttgca
420
atgccaccag ccagctatga cactgccggt ctcccatgc ccacagcaac actgggtaac
480
ctccgaggct atggcatggc atccccaggc ctgcgagccc ccagcctcac acccccacaa
540
ctggccactc caaatttgca acagtctctt ccccaggcca ctgccagtc cttgctggga
600
cctcctcctg ttgggggtccc catgaaccct tcccagttca acctttcagg acggaacccc
660
cagaaacagg cccggacctc ctctctacc accccaatc gaaaggattc ttcttctcag
720
acaatgcctg tggaaagaca gtcagacccc ccagaggggt ctgaggaagc cgcagagccc
780
cggatggaca caccagaaga ccaagattta ctgccctgcc cagaggacat cgccaaggaa
840
aaacgcactc cagcacctga gcctgagcct tgtgaggcgt ccgagctgcc agcaaagaga
900
ttgaggagct cagaagagcc cacagagaag gaacctccag ggcagttaca ggtgaaggcc
960
cagccgcagg cccggatgac agtaccgaaa cagacacaga caccagacct gctgcctgag
1020
gccctggaag cccaagtgt gccacgattc cagccacggg tcctgcaggt ccaggcccag
1080
gtgcagtcac agactcagcc gcggatacca tccacagaca ccaggtgca gccaaagctg
1140
cagaagcagg cgcaaacaca gacctctcca gagcacttag tgctgcaaca gaagcagggtg
1200
cagccacagc tgcagcagga ggcagagcca cagaagcagg tgcagccaca ggtacagcca
1260
caggcacatt cacagggccc aaggcagggt cagctgcagc aggaggcaga gccgctgaag
1320
caggtgcagc cacagggtga gccccaggca cattcacagc ccccaaggca ggtgcagctg
1380
cagctgcaga agcagggtcca gacacagaca tatccacagg tccacacaca ggcacagcca
1440
agcgtccagc cacaggagca tcctccagcg caggtgtcag tacagccacc agagcagacc
1500
catgagcagc ctacacacca gccgcagggt tcgttgctgg ctccagagca aacaccagtt
1560
gtggttcatg tetgccccgt ggagatgcca cctgatgcag tagaagctgg tggaggcatg
1620

gaaaagacct tgccagagcc tgtgggcacc caagtcagca tggagagat tcagaatgag
1680
tcggcctgtg gcctagatgt gggagaatgt gaaaacagag cgagagagat gccaggggta
1740
tggggcgccg ggggctccct gaaggtcacc attctgcaga gcagtgcag ccgggccttt
1800
agcactgtac ccctgacacc tgtccccgc cccagtgcact ccgtctcctt caccctgcg
1860
gctaccagca ctccctctaa gcaggccctc cagttcttct gctacatctg caaggccagc
1920
tgctccagcc agcaggagtt ccaggaccac atgtcggagc ctcagcacca gcagcggcta
1980
ggggagatcc agcacatgag ccaagcctgc ctctgtccc tgcgtcccgt gcccggggac
2040
gtcctggaga cagaggatga ggagcctcca ccaaggcgct ggtgcaacac ctgccagctc
2100
tactacatgg gggacctgat ccaacaccgc aggacacagg accacaagat tgccaaacaa
2160
tccttgcgac ccttctgcac cgtttgcaac cgctacttca aaaccctcg caagtctgtg
2220
gagcacgtga agtcccaggg gcataaggac aaagccaagg agctgaagtc gcttgagaaa
2280
gaaattgctg gccaaatga ggaccacttc attacagtgg acgctgtggg ttgcttcgag
2340
ggatgatgaag aagaggaaga ggatgatgag gatgaagaag agatcgaggt tgaggaggaa
2400
ctctgcaagc aggtgaggtc cagagatata tccagagagg agtggaaggg ctcgagagacc
2460
tacagcccca atactgcata tgggtgtggac ttctgtgtgc ccgtgatggg ctatatctgc
2520
cgcctctgcc acaagttcta tcacagcaac tcaggggcac agctctccca ctgcaagtcc
2580
ctgggccact ttgagaacct gcagaaatac aaggcggcca agaaccctag ccccaccacc
2640
cgacctgtga gcgcgcgtg cgcaatcaac gcccggaacg ctttgacagc cctgttcacc
2700
tccagcggcc gccaccctc ccagcccaac acccaggaca aaacaccag caaggtgacg
2760
gctcgacct cccagcccc actacctcg cgctcaacct gcctcaaac ctgatatagg
2820
gacctccctg tccttgacct gcctgggtcc agatctgcta atgcttttta ggagtctgcc
2880
tggaaacttt gacatggttc atgtttttac tcaaaatcca ataaaacaag gtagtttggc
2940
aaaaaaaaaa aaaaa
2955

<210> 6218

<211> 133

<212> PRT

<213> Homo sapiens

<400> 6218

Val Arg Ser Arg Asp Ile Ser Arg Glu Glu Trp Lys Gly Ser Glu Thr

```

      1             5             10             15
Tyr Ser Pro Asn Thr Ala Tyr Gly Val Asp Phe Leu Val Pro Val Met
      20             25             30
Gly Tyr Ile Cys Arg Ile Cys His Lys Phe Tyr His Ser Asn Ser Gly
      35             40             45
Ala Gln Leu Ser His Cys Lys Ser Leu Gly His Phe Glu Asn Leu Gln
      50             55             60
Lys Tyr Lys Ala Ala Lys Asn Pro Ser Pro Thr Thr Arg Pro Val Ser
      65             70             75             80
Arg Arg Cys Ala Ile Asn Ala Arg Asn Ala Leu Thr Ala Leu Phe Thr
      85             90             95
Ser Ser Gly Arg Pro Pro Ser Gln Pro Asn Thr Gln Asp Lys Thr Pro
      100            105            110
Ser Lys Val Thr Ala Arg Pro Ser Gln Pro Pro Leu Pro Arg Arg Ser
      115            120            125
Thr Arg Leu Lys Thr
      130

```

<210> 6219
 <211> 2495
 <212> DNA
 <213> Homo sapiens

```

<400> 6219
tttttttttt ttttttcgcg gtggaggatc aggtttaatg gtcactatga gggatcgta
60
catcggttcca agcccgggccc ccgcccacgc cctccctcag ctgggaacac agccagggtgc
120
ctcagacccc ctggtctctgc acaagggggg cctgccccct cgccccagnn ctatatacac
180
gacagcccat cctgctggcc gtggacaaaa gctgggagct ccntgtgccc agtcaggagc
240
ccctacagtc caccagctgc gcggccgggt ccaggnggcc cactgtggtg ccagcgagtt
300
tctcaaaacc cagggcccgag ccccgcnnt gggccccctgc caagccccag gcctgtgtgc
360
tgggatggag cctccacact gaggtctgta aaagctgaac tcaacagcag caatgagagt
420
gctgggtggg cttgggggga tggggagcag gccccacca gagcctcttc tgaaggaggg
480
gacgctgcgc ccttccttcc tgctgcccg actgccccta ccgggtccgg cgccggctga
540
ggtctaagta agcaggggatg gggggtggca agaggagtgt aagtgaagc acagacagtc
600
ggagactcgg ccagtgtaga cagaccaga gactcggcca gtgtagacag agccaggctg
660
ggcagcccg cgacgctgc cccacgcaca cgggccacc tgggtctggt gatcgatacg
720
gcagggaggg ggtgggcagg gaggtcctg aacacatgtg ggctgctggg ctgctgggcc
780
ggggtgccta cactgtaact agcagcatag tgcttaacta gttacaaga aatgctgctt
840
cccttgaat tgttcgggg gtgtagaaat tgcacttatt tctatgaacc ccatggaggg
900

```

atgcccacag ctgagcctcc aggcgaggca tggcagggtca gtgcctggcc gctgagcatc
960
cacggggccac agggcgggat cctccccggcc cccagggact gcagcctctg cgccacggg
1020
tgcagcgagg accggaaccc acagggggaa cctgagcaac gtctgagggtg ccctgaagtg
1080
gtccaggcg agaccggagc cacacagtcc cggggagcac gaggcggccc agccccaggt
1140
cccgggtgcag agggagtggc ctgatggtga ctgggcggag gcctctgccc ctcacaggac
1200
gtcgtcaaag tccagcagct tcgagtgtctg gcggctcttc cacaggcgat acaaccggaa
1260
gtcaaagtac gtctcgatca tctgcttccc ttgggctgag agctccagggt gtgactcgaa
1320
ggtgacccta taaggagtca tgagggtcct gaggttctgg aacagcttct ctccattggg
1380
gttccccaga atgtagcagc ccatgatgtg gatgacgttc ggctctgggt tcaactttgt
1440
catcaggcgg ctccagccgt tccagaagtg aatcatgtcc tcttccctct ccaactttggc
1500
aaaggtggcc accttgttct tgaggagata gaggtgtcca ggacctccct ggcagaaaat
1560
cagcattttc cagatcttgg ctcccttgtg gtagacgttc agcttccctct ctatctcctc
1620
aaggatgtcc tcgaagggtg cgtgctcatg gtcgtagagg atggggatga tggaggggtc
1680
atccccggcg atgatagtgg ggatgtactc agccttgggc accttggagg aaatgagcat
1740
gaccttttgt ggcacgaagc ctccgggtgc gcaggccaca gcctccaggc ccttctcagt
1800
gtccagtcac aggtcctcga aggcctcgtc cagcgtgcag tgggagctct gcaggtcact
1860
gctgtctcgg gagtcgtggg aagtgtcggc ttcatgggg gtgggggtcgc tccaggaccg
1920
gctgaagctc cgctcgcggc ctccagcaac gtctgggctt tacacctcc ggctgcccag
1980
catgcgcagg tgtttgcgga agttcctctg gattacagac gcggaatcat tctcccgtt
2040
ccggcgcttc ctctcccggt agccccgaa caccgagatg gcttgcatag ttgtggttgc
2100
tgtctggaag ctgaaaagat ttcccttggg gaaccaggta cgaataggga tgcgtcaga
2160
cacacggtea acgctgtaca tctctccag cttcttgcgg cgaccggagg tctcaggcag
2220
aggtggctgg tccagcccaa aggcggagg ggtggggcca ggagccagct gggcacatac
2280
cggggcactc ccttggagcc cctggcgngc tgcccgccca gcttcttggc agggcctgct
2340
gacgtcctcc cggctgccac cagggtcggc gcgcaggggc tggctgtgat ggtgagggtg
2400
ccgtgcgcgc cggcccttea ccaccgccag ctcaatggcc tccgcctcag ggctgggcag
2460
cagggcaggc tccccagaga tgaagtacac tcgag
2495

<210> 6220
 <211> 179
 <212> PRT
 <213> Homo sapiens

<400> 6220
 Phe Phe Phe Phe Phe Ser Arg Trp Arg Ile Arg Phe Asn Gly His Tyr
 1 5 10 15
 Glu Gly Ile Val His Arg Ser Lys Pro Gly Pro Arg Pro Ser Pro Pro
 20 25 30
 Ser Ala Gly Asn Thr Ala Arg Cys Pro Gln Thr Pro Gly Ser Ala Gln
 35 40 45
 Gly Gly Pro Ala Pro Ser Pro Gln Xaa Tyr Ile His Asp Ser Pro Ser
 50 55 60
 Cys Trp Pro Trp Thr Lys Ala Gly Ser Ser Xaa Cys Pro Val Arg Ser
 65 70 75 80
 Pro Tyr Ser Pro Pro Ala Ala Arg Pro Gly Pro Gly Xaa Pro Leu Trp
 85 90 95
 Cys Gln Arg Val Ser Gln Asn Pro Gly Pro Ser Pro Ser Xaa Gly Pro
 100 105 110
 Leu Pro Ser Pro Arg Pro Val Cys Trp Asp Gly Ala Ser Thr Leu Arg
 115 120 125
 Leu Val Lys Ala Glu Leu Asn Ser Ser Asn Glu Ser Ala Gly Trp Ala
 130 135 140
 Trp Gly Asp Gly Glu Gln Ala Pro Pro Arg Ala Ser Ser Glu Gly Gly
 145 150 155 160
 Asp Ala Ala Pro Phe Leu Pro Ala Ala Gln Thr Ala Pro Thr Gly Ser
 165 170 175
 Gly Ala Gly

<210> 6221
 <211> 1487
 <212> DNA
 <213> Homo sapiens

<400> 6221
 nnctgcagga aaaagtgcgt ctctgacgca gatgctctag tgttttctaa gtgacagctc
 60
 ttagggcacc ctggatgccc cttgattcca cctcattac ttgtcctctc tcggtgctgc
 120
 ctcttggtcc cttgctttgt ttgttttca tattactccc gtatttcctg acatatctgc
 180
 atttttctac ttactgtgtc ccgatgcagc tgctcctggt ttccacatcc aaggtttctc
 240
 ctccatggca ctactgacgt ttgggctga cgaattcttt ggggacagga tggggcatgt
 300
 cctgtgcatt ttaggatggt gagtagcagc cctggcctgc atccactaga tgccagttga
 360
 acctccccag gttctgaagc cagacacaag atgaaaaagc taactccaaa acagaaattt
 420
 tctgaagatt tagagtcata taagatatca gtggtaatgc aggaatcagc tgagaaactt
 480

tcagaaaagt tacataagtg taaagaattt gtggacagtt gcaggcttac ttccctact
 540
 agtggtgatg aatacagcag gggcttcctt caaaacctta accttattca agatcagaat
 600
 gcgcaaaaca ggtggaagca gggcagatat gatgaggatg gcaaaccctt caatcaaaga
 660
 tctttgcttt tggggcatga gcgaattctc acaagagcaa agtcttatga atgcagtga
 720
 tgtggaaaag tcattaggcg taaggcatgg ttgatcaac atcaaagaat tcacttttta
 780
 gagaatcctt ttgagtgtaa ggtctgtggg caagccttca gacagcggtc agctcttacg
 840
 gtccataaac agtgtcacct gcaaaacaag ccatacagat gtcatgactg tggaaagtgt
 900
 tttcggcagc tcgcgtatct tgttgaaat aagaggattc acaccaaaga aaaaccttat
 960
 aaatgtagca aatgtgaaaa aacgtttagt cagaattcaa cccttattcg acatcagggtg
 1020
 atccatagtg gagaaaaacg ccataaatgc cttgagtgtg gaaaagcctt tggccggcat
 1080
 tcaaccttc tatgtcatca acagattcac agtaaaccga acaccataa atgcagtga
 1140
 tgtggacagt cctttggtag gaatgtggat ctcattcagc atcaaagaat ccatacaaag
 1200
 gaggaattct ttcaatgtgg agaatgtggg aaaacgttta gttttaagag gaatcttttt
 1260
 cgacatcagg tcattcacac tggaaagcaa ctctaccaat gtgtcatatg tggaaaatct
 1320
 ttcaagtggc acacaagctt tattaagcac cagggcactc acaaaggaca gatatccaca
 1380
 tgatgttaat tggaaagcag tcattggaga actagaactt ataaacctct acctcaagtg
 1440
 tgtatcacgt aattgtttcc atgaaaagca ataaatgtaa caaaggg
 1487

<210> 6222

<211> 330

<212> PRT

<213> Homo sapiens

<400> 6222

Met Lys Lys Leu Thr Pro Lys Gln Lys Phe Ser Glu Asp Leu Glu Ser
 1 5 10 15
 Tyr Lys Ile Ser Val Val Met Gln Glu Ser Ala Glu Lys Leu Ser Glu
 20 25 30
 Lys Leu His Lys Cys Lys Glu Phe Val Asp Ser Cys Arg Leu Thr Phe
 35 40 45
 Pro Thr Ser Gly Asp Glu Tyr Ser Arg Gly Phe Leu Gln Asn Leu Asn
 50 55 60
 Leu Ile Gln Asp Gln Asn Ala Gln Thr Arg Trp Lys Gln Gly Arg Tyr
 65 70 75 80
 Asp Glu Asp Gly Lys Pro Phe Asn Gln Arg Ser Leu Leu Leu Gly His
 85 90 95
 Glu Arg Ile Leu Thr Arg Ala Lys Ser Tyr Glu Cys Ser Glu Cys Gly

```

      100      105      110
Lys Val Ile Arg Arg Lys Ala Trp Phe Asp Gln His Gln Arg Ile His
      115      120      125
Phe Leu Glu Asn Pro Phe Glu Cys Lys Val Cys Gly Gln Ala Phe Arg
      130      135      140
Gln Arg Ser Ala Leu Thr Val His Lys Gln Cys His Leu Gln Asn Lys
      145      150      155      160
Pro Tyr Arg Cys His Asp Cys Gly Lys Cys Phe Arg Gln Leu Ala Tyr
      165      170      175
Leu Val Glu His Lys Arg Ile His Thr Lys Glu Lys Pro Tyr Lys Cys
      180      185      190
Ser Lys Cys Glu Lys Thr Phe Ser Gln Asn Ser Thr Leu Ile Arg His
      195      200      205
Gln Val Ile His Ser Gly Glu Lys Arg His Lys Cys Leu Glu Cys Gly
      210      215      220
Lys Ala Phe Gly Arg His Ser Thr Leu Leu Cys His Gln Gln Ile His
      225      230      235      240
Ser Lys Pro Asn Thr His Lys Cys Ser Glu Cys Gly Gln Ser Phe Gly
      245      250      255
Arg Asn Val Asp Leu Ile Gln His Gln Arg Ile His Thr Lys Glu Glu
      260      265      270
Phe Phe Gln Cys Gly Glu Cys Gly Lys Thr Phe Ser Phe Lys Arg Asn
      275      280      285
Leu Phe Arg His Gln Val Ile His Thr Gly Ser Gln Leu Tyr Gln Cys
      290      295      300
Val Ile Cys Gly Lys Ser Phe Lys Trp His Thr Ser Phe Ile Lys His
      305      310      315      320
Gln Gly Thr His Lys Gly Gln Ile Ser Thr
      325      330

```

<210> 6223

<211> 944

<212> DNA

<213> Homo sapiens

<400> 6223

```

acccccaccc tcaactgtgca cccccaccc tccaccacaca ccccatccc cacctgcacc
60
ccacccacaca ctcacaaccc cccactccca cctgcaacac cccactccc caccgcacc
120
ccccaacttc ccatcccccc actcctctcc attcctctc ttgcttgtgc gcataagcaa
180
gtccactca ttgcaactgt aaccaatacc aagcatgaga acaggaacta gctccaccct
240
ctaaccacca ctccagctgc agacgccag gagtttgtgc aggggcgcag cgctccagcc
300
atggcgcggtt cgctcgtcca cgacaccgtg ttctactgcc tgagtgtata ccaggtaaaa
360
ataagcccca cacctcagct gggggcagca tcaagcgcag aaggccatgt tggccaagga
420
gtccaggcc tcattggtaa tatgaaccct gagggcggtg tgaaccacga gaacggcatg
480
aaccgcgatg gcgcatgat ccccgagggc ggcggtggaa accaggagcc tcggcagcag
540

```


ccgcagcccc cgccggagga gccggcccag gcggccatgg aggggccgca gcccgagaac
 600
 atgcagccac gaactcggcg cacgaagttc acgctgttgc aggtggagga gctggaaagt
 660
 gttttccgac aactcaata ccctgatgtg cccacaagaa gggaacttgc cgaaaactta
 720
 ggtgtgactg aagacaaagt gcgggtcagt acacttgaaa aagcaatttg agaggacagc
 780
 cattctaaaa cctgcttcag ggcattgaag gctttgaagg ctttgcctg aacgttctaa
 840
 agttgttgtt tttattattg tcttttttat gttgacaaat aagttttgaa gtttgggttc
 900
 cttgtcggta gaaaaggaag taagctccag cttatggttc tttc
 944

<210> 6224

<211> 156

<212> PRT

<213> Homo sapiens

<400> 6224

Met	Ala	Arg	Ser	Leu	Val	His	Asp	Thr	Val	Phe	Tyr	Cys	Leu	Ser	Val
1				5					10					15	
Tyr	Gln	Val	Lys	Ile	Ser	Pro	Thr	Pro	Gln	Leu	Gly	Ala	Ala	Ser	Ser
		20						25					30		
Ala	Glu	Gly	His	Val	Gly	Gln	Gly	Ala	Pro	Gly	Leu	Met	Gly	Asn	Met
		35				40						45			
Asn	Pro	Glu	Gly	Gly	Val	Asn	His	Glu	Asn	Gly	Met	Asn	Arg	Asp	Gly
	50					55					60				
Gly	Met	Ile	Pro	Glu	Gly	Gly	Gly	Gly	Asn	Gln	Glu	Pro	Arg	Gln	Gln
	65				70				75					80	
Pro	Gln	Pro	Pro	Pro	Glu	Glu	Pro	Ala	Gln	Ala	Ala	Met	Glu	Gly	Pro
			85					90					95		
Gln	Pro	Glu	Asn	Met	Gln	Pro	Arg	Thr	Arg	Arg	Thr	Lys	Phe	Thr	Leu
			100					105					110		
Leu	Gln	Val	Glu	Glu	Leu	Glu	Ser	Val	Phe	Arg	His	Thr	Gln	Tyr	Pro
	115						120					125			
Asp	Val	Pro	Thr	Arg	Arg	Glu	Leu	Ala	Glu	Asn	Leu	Gly	Val	Thr	Glu
	130					135					140				
Asp	Lys	Val	Arg	Val	Ser	Thr	Leu	Glu	Lys	Ala	Ile				
	145				150					155					

<210> 6225

<211> 3851

<212> DNA

<213> Homo sapiens

<400> 6225

nggatccagc tgctgcgcag gtcagaccca gctgcttttg agtcccgccct ggagaaacgc
 60
 agtgaatttc ggaagcagcc agtggggcat tccaggcaag gtgattttat caaatgtgtg
 120
 gaacagaaga cagatgcctt ggggaaacag tctgtgaaca gaggattcac taaggacaag
 180

actctcagtt caatctttaa cattgagatg gtaaaagaaa aaactgcaga agaaataaaa
240
cagatttggc agcaatattt tgcagcaaaa gatacagttc acgcagttat tctgcagaa
300
aagtttgatt tgatctggaa ccgggctcag tctgtccaa ctttctatg tgctctgcca
360
agaagggaag gttatgagtt tttgttagga caatggacag gtactgaact ccacttcaact
420
gcacttataa atattcagac ccgaggggaa gctgcagcca gccagctgat tttatatcac
480
tatactgaac ttaaggaaga aaagggcata gtgctgatga ctgcagaaat ggattccaca
540
tttctgaatg ttgctgaggc acagtgcac gccaccaag ttcagctctt ctacgctact
600
gatcggaag agacctacgg gttagtggag acctttaacc tcagaccaa tgagttcaaa
660
tatatgtctg tcatcgctga attggagcaa agcggacttg gagcagaact gaaatgtgcc
720
cagaaccaa ataagactta gaactgtaca ggttggccct tcacctagtt gactcagccc
780
tcgatagtct agagcccacc cctcctcag gaactcaaga gtcagcatt tataatgagc
840
agttgtaat gagttgccct atgtgcttgt cgcaagcagt cacagagatg agccctatta
900
cttgatattc aggaacaaag gtacctgaac attctgataa ttatctcagc atacttgagg
960
tttcttttt taagtgttcg aggttataac aagagacagc caaggacct caagacagtt
1020
gacttgattt tgcacagtgt aacagcgag ttgcattctg gccactttga ccttatagct
1080
cccaatgat gagtttgtca tctttatgaa ctcatgacag gataataagc ttgaagacct
1140
gctgtagtta gatatgggct ttaatccttc ccatgcacca gtcagctgaa caaaagcata
1200
agccaaacat cctgttttaa ctgtagaata accagatatt cccatcaggt taaagacttc
1260
atctagatga tgccccccag agatgccttt agtgtaagta gctggcttgg ggtatcagca
1320
aatttcaggt atagttagat aaacaggtag agggcctgca tactattaaa ccatagtttg
1380
tggcaccgct ttttctaact ccacctgtta gaagctatgt gtttgaagga atgaatcagt
1440
gcagtataaa taaaattctt ttgtaaggag aagattaatc ctggtttgca tgattttttt
1500
aaaaacaact ctaaacatga tacgaaaaag tggatgaaag caaatgttcc cagattggat
1560
gtggggaaaa tatagcaata attttttttt aagtctggct tacaatgttt gttatacaaa
1620
ataatgaaat ctgagttatg tactgtccat tgtgtcaggg ctatgggctg attttatcaa
1680
aactcatctt gggactgaaa aattgttttg aatgccagaa ataagaaagt tgttctccag
1740
agctggaaac ccatctttcg tttgtagtgt cactgttgtg gctccaagct cagtgatagg
1800

aaaggacggt gggtacacac cagccttctg aaccaaggc cccagttatt gttgtcagct
1860
gcctttacca tggcatttct ttctcttctt ttttttctg agatgaagtc ttgctctgtc
1920
ttgcccaggc tggagtagag tagcgtgatc tcagctcgct gcaacctcta cctccctggg
1980
tcaagtatt ctgctgctc agcctcctga ggagctagga ttacaggcgc atgccaccat
2040
acctggctta tttttgtatt gttgtagaga cagggtttca ctttgttggc caggtgggt
2100
ggtctcgaac tcctggctc aagtgatcca ccaccttgac ctcccaaagt gctgggatta
2160
caggtgtgag ccacgtgccc tggcctgaca tttctttatt gatctaact gctccactct
2220
gctgctcctg cctaagatct ggttatatga cactgaatgt ggtgagtggg aatttaagca
2280
gtattcgagc tttgtgtgtg tgtgttttct tccttcaga agaattttta taggttgggc
2340
ctgtccctaa gctctttaaa taggggtggc atcccactat tctctgagcc gtgtctattt
2400
tgttgacct ttgagctat gtattgagag agacagatag tattttttta aactggggaa
2460
gctgctatcc ttctactatt tctctaaagg ttgagctgtt aactaatgta aattctggac
2520
ctgcttctgg tcctggcagt ttatcttttg agaaacttga gtcttatctg cctgcccatt
2580
ttcattaaat gccttctgac cttctgaatg ttttgggtcc caagaatttt tgacatcaga
2640
tgggggtgtt tttattggta tccagttatg tttgcttgc tttccagatg ggcccagtta
2700
ttagccatac atagtacatt gatacacctc caccagcggg tgaggaaatg atggaaaaag
2760
gagtaagaag tggccattcg ttttaatcat tcctcctgga tttgtctca gtccccaact
2820
gccaagtagg atgtgtccat gtataaatgt gtggggcatg actaaagtac cacgtagctg
2880
ttctttatat ttatttacct agaaagatct ggcaaagaac tcaaagaaaa ttgtaccatt
2940
taatcagtaa atttgtcccc tgggtgtagc atggtgttat agaaagtgga caggctttag
3000
agttaagtga atctgggttc atatgttagt gttgctattc attagctcta tactgttgaa
3060
caaattgctt aaactatcta attttgggt ttttttttcc atctaaaata gggataataa
3120
tatctacctc ataggattat tgtgagaatt aaattaactt cactatagta gaaaatatca
3180
actaccatcc ttttctctac ttcccttgcc cctcattaaa gactaataca agttagcatt
3240
tcagatgtgt agatcattct ttattccagt taaaagaaca aactttatct catcagttct
3300
gaaactttta gatgcagtag catcacctaa agtgctttta aaatgcagat tctcaggcct
3360
caaccgtaca ccccccccc acacacgtac taaatcaaga atatgtgcag aaggtaactg
3420

gaatctactt gttaatatgt gtcctaaatg attctgatgt aggtaattag ccagccacac
 3480
 ttgagaacc actgccttat ctattcttta caaaaatgta cattgccagg tctttctttc
 3540
 ctgtggatgc taactatagg atatttaggt tcctctgttc ttgtctccc atagtggccc
 3600
 cctttgcaaa ctccaaatac attatattta tttattcttg tgtctttttt cccccactag
 3660
 actgtgagct ccttgagggc caggacttat ctctgttcgc agtgccaagg acatggcctg
 3720
 gaccatagaa gatactcagt tttttgttga ataaataggt aatatggatt tcaacccaaa
 3780
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 3840
 aaaaaaaaaa a
 3851

<210> 6226

<211> 246

<212> PRT

<213> Homo sapiens

<400> 6226

Xaa	Ile	Gln	Leu	Leu	Arg	Arg	Ser	Asp	Pro	Ala	Ala	Phe	Glu	Ser	Arg
1			5					10					15		
Leu	Glu	Lys	Arg	Ser	Glu	Phe	Arg	Lys	Gln	Pro	Val	Gly	His	Ser	Arg
			20					25					30		
Gln	Gly	Asp	Phe	Ile	Lys	Cys	Val	Glu	Gln	Lys	Thr	Asp	Ala	Leu	Gly
			35					40					45		
Lys	Gln	Ser	Val	Asn	Arg	Gly	Phe	Thr	Lys	Asp	Lys	Thr	Leu	Ser	Ser
			50					55					60		
Ile	Phe	Asn	Ile	Glu	Met	Val	Lys	Glu	Lys	Thr	Ala	Glu	Glu	Ile	Lys
65								70					75		80
Gln	Ile	Trp	Gln	Gln	Tyr	Phe	Ala	Ala	Lys	Asp	Thr	Val	Tyr	Ala	Val
Ile	Pro	Ala	Glu	Lys	Phe	Asp	Leu	Ile	Trp	Asn	Arg	Ala	Gln	Ser	Cys
Pro	Thr	Phe	Leu	Cys	Ala	Leu	Pro	Arg	Arg	Glu	Gly	Tyr	Glu	Phe	Phe
Val	Gly	Gln	Trp	Thr	Gly	Thr	Glu	Leu	His	Phe	Thr	Ala	Leu	Ile	Asn
Ile	Gln	Thr	Arg	Gly	Glu	Ala	Ala	Ala	Ser	Gln	Leu	Ile	Leu	Tyr	His
145															160
Tyr	Pro	Glu	Leu	Lys	Glu	Glu	Lys	Gly	Ile	Val	Leu	Met	Thr	Ala	Glu
Met	Asp	Ser	Thr	Phe	Leu	Asn	Val	Ala	Glu	Ala	Gln	Cys	Ile	Ala	Asn
Gln	Val	Gln	Leu	Phe	Tyr	Ala	Thr	Asp	Arg	Lys	Glu	Thr	Tyr	Gly	Leu
Val	Glu	Thr	Phe	Asn	Leu	Arg	Pro	Asn	Glu	Phe	Lys	Tyr	Met	Ser	Val
Ile	Ala	Glu	Leu	Glu	Gln	Ser	Gly	Leu	Gly	Ala	Glu	Leu	Lys	Cys	Ala
225															240
Gln	Asn	Gln	Asn	Lys	Thr										

245

<210> 6227
 <211> 830
 <212> DNA
 <213> Homo sapiens

<400> 6227
 nnacagcctt cctgaaaaca caccagcgc aggcaccagg ggtcccaccg atggacacac
 60
 cttggaggca gcacctacag agcgggtgatt ttcgacatgg gcggagttct cattccttct
 120
 ccagggagag tcgctgcaga atgggaggta cagaatcgta tcccttcttg aactatatta
 180
 aaggccttga tggaaggtgg tgaaaatggg ccctggatga gatttatgag agcagaaata
 240
 acagcagagg gttttttacg agaatttggg agactttgct ctgaaatgtt aaagacctcc
 300
 gtgcctgtgg actcattttt ctctctgttg accagtgage gaggggcaaa gcagttccca
 360
 gtgatgactg aggccataac tcaaattcgg gcaaaaggte ttcagactgc agtcttgage
 420
 aataattttt atcttcccaa ccagaaaagc tttttgcccc tggaccggaa acagtttgat
 480
 gtgattgtgg agtcttgcac ggaagggatc tgtaagccag accctaggat ctacaagctg
 540
 tgcttggagc agctcggcct gcagccctct gaggccatct ttcttgatga ccttggaaca
 600
 aatctaaaag aagctgccag acttgggtatt cacaccatta aggttaatga cccagagact
 660
 gcagtaaagg aattagaagc tctcttgggt tttacattga gaggaggtgt tccaaacact
 720
 cggcctgtga aaaagacgat ggaattccg aaagattcct tgcagaagta cctcaaagac
 780
 ttactgggta tccagaccac aggccattg gaactacttc agtttgatca
 830

<210> 6228
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 6228
 Lys His Thr Gln Arg Arg His Gln Gly Ser His Arg Trp Thr His Leu
 1 5 10 15
 Gly Gly Ser Thr Tyr Arg Ala Val Ile Phe Asp Met Gly Gly Val Leu
 20 25 30
 Ile Pro Ser Pro Gly Arg Val Ala Ala Glu Trp Glu Val Gln Asn Arg
 35 40 45
 Ile Pro Ser Gly Thr Ile Leu Lys Ala Leu Met Glu Gly Gly Glu Asn
 50 55 60
 Gly Pro Trp Met Arg Phe Met Arg Ala Glu Ile Thr Ala Glu Gly Phe
 65 70 75 80
 Leu Arg Glu Phe Gly Arg Leu Cys Ser Glu Met Leu Lys Thr Ser Val

5410

85 90 95
 Pro Val Asp Ser Phe Phe Ser Leu Leu Thr Ser Glu Arg Val Ala Lys
 100 105 110
 Gln Phe Pro Val Met Thr Glu Ala Ile Thr Gln Ile Arg Ala Lys Gly
 115 120 125
 Leu Gln Thr Ala Val Leu Ser Asn Asn Phe Tyr Leu Pro Asn Gln Lys
 130 135 140
 Ser Phe Leu Pro Leu Asp Arg Lys Gln Phe Asp Val Ile Val Glu Ser
 145 150 155 160
 Cys Met Glu Gly Ile Cys Lys Pro Asp Pro Arg Ile Tyr Lys Leu Cys
 165 170 175
 Leu Glu Gln Leu Gly Leu Gln Pro Ser Glu Ser Ile Phe Leu Asp Asp
 180 185 190
 Leu Gly Thr Asn Leu Lys Glu Ala Ala Arg Leu Gly Ile His Thr Ile
 195 200 205
 Lys Val Asn Asp Pro Glu Thr Ala Val Lys Glu Leu Glu Ala Leu Leu
 210 215 220
 Gly Phe Thr Leu Arg Val Gly Val Pro Asn Thr Arg Pro Val Lys Lys
 225 230 235 240
 Thr Met Glu Ile Pro Lys Asp Ser Leu Gln Lys Tyr Leu Lys Asp Leu
 245 250 255
 Leu Gly Ile Gln Thr Thr Gly Pro Leu Glu Leu Leu Gln Phe Asp
 260 265 270

<210> 6229

<211> 3105

<212> DNA

<213> Homo sapiens

<400> 6229

nngagcggcc gcccgggcag gtaggaggct gagtcctggc cgcgggcccgg gcccggggag
 60
 ccgctggcag gagcgcttgg ggatcctcca agggcgacca tggccttgct gggtaaagcgc
 120
 tgtgacgtcc ccaccaacgg ctgcggaccc gaccgctgga actccgcgtt caccgcgcaa
 180
 gacgagatca tcaccagcct cgtgtctgcc ttagactcca tgtgctcagc gctgtccaaa
 240
 ctgaacgccg aggtggcctg tgtcgccgtg cacgatgaga gcgcctttgt ggtgggcaca
 300
 gagaagggga gaatgttctt gaatgcccgg aaggagctac agtcagactt cctcaggttc
 360
 tgccgagggc ccccgaggaa ggatccggag gcagagcacc ccaagaaggt gcagcggggc
 420
 gaggtggag gccgtagcct ccctcggtcc tccctggaac atggctcaga tgtgtacctt
 480
 ctgcggaaga tggtagagga ggtgtttgat gttctttata gcgaggccct gggaagggcc
 540
 agtgtggtgc cactgcccta tgagaggctg ctgaggagc cagggtctgt gcccggtgcag
 600
 gggtgcccg aaggcctggc cttccgaagg ccagccgagt atgaccccaa ggccctcatg
 660
 gccatcctgg aacacagcca ccgcatccgc ttcaagctca agaggccact tgaggatggc
 720

gggcgggact cgaaggccct ggtggagctg aacggtgtct cctgattcc caaggggtca
780
cgggactgtg gcctgcatgg ccaggccccc aaggtgccac ccaggacct gcccacaacc
840
gccacctcct cctccatggc cagcttctctg tacagcacgg cgctcccca ccacgccatc
900
cgagagctca agcaggaagc accttctctg ccccttgccc ccagcgacct gggcctgagt
960
cggcccatgc cagagcccaa ggccaccggt gcccaagact tctccgactg ttgtggacag
1020
aagcccactg ggcttgggtg gcctctctc cagaacgtcc atgcctccaa gcgcattctc
1080
ttctccatcg tccatgacaa gtcagagaag tgggacgcct tcataaagga aaccgaggac
1140
atcaacacgc tccgggagtg tgtgcagatc ctgtttaaca gcagatatgc ggaagccctg
1200
ggcctgggca acatggctcc cgtgccctac cggaagattg cctgtgacct ggaggctgtg
1260
gagatcgtgg gcatcccgga caagatcccc ttcaagcgcc cctgcactta cggagtcccc
1320
aagctgaagc ggatcctgga ggagcgccat agtatccact tcatcattaa gaggatgttt
1380
gatgagcgaa ttttcacagg gaacaagttt accaaagaca ccacgaagct ggagccagcc
1440
agcccgccag aggacacctc tgcagaggtc tctagggcca ccgtccttga ccttgcctggg
1500
aatgtcgggt cagacaaggg cagcatgtct gaagactgtg ggccaggaac ctccggggag
1560
ctgggcgggc tgaggccgat caaaattgag ccagaggatc tggacatcat tcaggtcacc
1620
gtcccagacc cctcgccaac ctctgaggaa atgacagact cgatgcctgg gcacctgcca
1680
tcggaggatt ctggttatgg gatggagatg ctgacagaca aaggtctgag tgaggacgcg
1740
cggcccagg agaggcccg ggaggacagc cacggtgacg tgatccggcc cctgcggaag
1800
caggtggagc tgctcttcaa cacacgatac gccaaaggcca ttggcatctc ggagcccgtc
1860
aaggtgccgt actccaagtt tctgatgcac ccggaggagc tgtttgtggt gggactgcct
1920
gaaggcatct cctcccgag gcccaactgc ttcgggatcg ccaagctccg gaagattctg
1980
gaggccagca acagcatcca gtttgtctc aagaggcccc agctgctcac tgagggagtc
2040
aaagagccca tcgtggatag tcaagagagg gattccgggg accctctggt ggacgagagc
2100
ctgaagagac agggctttca agaaaattat gacgcgaggc tctcacggat cgacatcgcc
2160
aacacactaa gggagcaggt ccaggacctt ttcaataaga aatacgggga agccttgggc
2220
atcaagtacc cggctccaggt cccctacaag cggatcaaga gtaaccccg ctccgtgatc
2280
atcgaggggc tgccccagg aatcccgctc cgaaagccct gtacctcg ctcccagaac
2340

ctggagagga ttcttctgtt ggctgacaag atcaagttca cagtcaccag gcctttccaa
 2400
 ggactcatcc caaagcctga tgaagatgac gccaacagac tcggggagaa ggtgatcctg
 2460
 cgggagcagg tgaaggaact cttcaacgag aaatacgggt aggccctggg cctgaaccgg
 2520
 ccggtgctgg tcccttataa actaatccgg gacagcccag acgccgtgga ggtcacgggt
 2580
 ctgcctgatg acatccccct cgggaacccc aacacgtacg acatccaccg gctggagaag
 2640
 atcctgaagg cccgagagca tgtccgcatg gtcattcatta accagctcca accctttgca
 2700
 gaaatctgca atgatgccaa ggtgccagcc aaagacagca gcattcccaa gcgcaagaga
 2760
 aagcgggtct cggaaggaaa ttccgtctcc tcttctctct cgtcttctct ttctctgtcc
 2820
 tctaaccctg attcagtggc atcgccaac cagatctcac tcgtgcaatg gccaatgtac
 2880
 atggtggact atgccggcct gaacgtgcag ctcccgggac ctcttaatta ctgacctca
 2940
 gtactgaatc aggacctcac tcagaaagac taaaggaaat gtaatttatg tacaaaatgt
 3000
 atattcggat atgtatcgat gccttttagt ttttccaatg atttttacac tatattctg
 3060
 ccaccaaggc cttttttaat aagtaaaaaa aaaaaaaaaa aaaaa
 3105

<210> 6230

<211> 944

<212> PRT

<213> Homo sapiens

<400> 6230

Met	Ala	Leu	Leu	Gly	Lys	Arg	Cys	Asp	Val	Pro	Thr	Asn	Gly	Cys	Gly
1				5					10					15	
Pro	Asp	Arg	Trp	Asn	Ser	Ala	Phe	Thr	Arg	Lys	Asp	Glu	Ile	Ile	Thr
		20						25					30		
Ser	Leu	Val	Ser	Ala	Leu	Asp	Ser	Met	Cys	Ser	Ala	Leu	Ser	Lys	Leu
		35				40					45				
Asn	Ala	Glu	Val	Ala	Cys	Val	Ala	Val	His	Asp	Glu	Ser	Ala	Phe	Val
	50				55					60					
Val	Gly	Thr	Glu	Lys	Gly	Arg	Met	Phe	Leu	Asn	Ala	Arg	Lys	Glu	Leu
65				70					75					80	
Gln	Ser	Asp	Phe	Leu	Arg	Phe	Cys	Arg	Gly	Pro	Pro	Trp	Lys	Asp	Pro
			85					90					95		
Glu	Ala	Glu	His	Pro	Lys	Lys	Val	Gln	Arg	Gly	Glu	Gly	Gly	Gly	Arg
			100				105						110		
Ser	Leu	Pro	Arg	Ser	Ser	Leu	Glu	His	Gly	Ser	Asp	Val	Tyr	Leu	Leu
	115					120						125			
Arg	Lys	Met	Val	Glu	Glu	Val	Phe	Asp	Val	Leu	Tyr	Ser	Glu	Ala	Leu
	130				135					140					
Gly	Arg	Ala	Ser	Val	Val	Pro	Leu	Pro	Tyr	Glu	Arg	Leu	Leu	Arg	Glu
145					150				155					160	
Pro	Gly	Leu	Leu	Ala	Val	Gln	Gly	Leu	Pro	Glu	Gly	Leu	Ala	Phe	Arg

5414

```

      595              600              605
Gly Ile Ser Leu Arg Arg Pro Asn Cys Phe Gly Ile Ala Lys Leu Arg
  610              615              620
Lys Ile Leu Glu Ala Ser Asn Ser Ile Gln Phe Val Ile Lys Arg Pro
  625              630              635              640
Glu Leu Leu Thr Glu Gly Val Lys Glu Pro Ile Val Asp Ser Gln Glu
      645              650              655
Arg Asp Ser Gly Asp Pro Leu Val Asp Glu Ser Leu Lys Arg Gln Gly
      660              665              670
Phe Gln Glu Asn Tyr Asp Ala Arg Leu Ser Arg Ile Asp Ile Ala Asn
      675              680              685
Thr Leu Arg Glu Gln Val Gln Asp Leu Phe Asn Lys Lys Tyr Gly Glu
      690              695              700
Ala Leu Gly Ile Lys Tyr Pro Val Gln Val Pro Tyr Lys Arg Ile Lys
  705              710              715              720
Ser Asn Pro Gly Ser Val Ile Ile Glu Gly Leu Pro Pro Gly Ile Pro
      725              730              735
Phe Arg Lys Pro Cys Thr Phe Gly Ser Gln Asn Leu Glu Arg Ile Leu
      740              745              750
Ala Val Ala Asp Lys Ile Lys Phe Thr Val Thr Arg Pro Phe Gln Gly
      755              760              765
Leu Ile Pro Lys Pro Asp Glu Asp Asp Ala Asn Arg Leu Gly Glu Lys
      770              775              780
Val Ile Leu Arg Glu Gln Val Lys Glu Leu Phe Asn Glu Lys Tyr Gly
  785              790              795              800
Glu Ala Leu Gly Leu Asn Arg Pro Val Leu Val Pro Tyr Lys Leu Ile
      805              810              815
Arg Asp Ser Pro Asp Ala Val Glu Val Thr Gly Leu Pro Asp Asp Ile
      820              825              830
Pro Phe Arg Asn Pro Asn Thr Tyr Asp Ile His Arg Leu Glu Lys Ile
      835              840              845
Leu Lys Ala Arg Glu His Val Arg Met Val Ile Ile Asn Gln Leu Gln
      850              855              860
Pro Phe Ala Glu Ile Cys Asn Asp Ala Lys Val Pro Ala Lys Asp Ser
  865              870              875              880
Ser Ile Pro Lys Arg Lys Arg Lys Arg Val Ser Glu Gly Asn Ser Val
      885              890              895
Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Asn Pro Asp Ser
      900              905              910
Val Ala Ser Ala Asn Gln Ile Ser Leu Val Gln Trp Pro Met Tyr Met
      915              920              925
Val Asp Tyr Ala Gly Leu Asn Val Gln Leu Pro Gly Pro Leu Asn Tyr
      930              935              940

```

<210> 6231

<211> 471

<212> DNA

<213> Homo sapiens

<400> 6231

```

tgatcattgg gatcacttgt tggaatggcc gggttcctgt gcaggcacct agcaaattgc
60
taccaatgac aggcctact cacagccact gcactccagc ttggggcgaca gaacgaggcc
120

```

ttgccttttt aaaaaaaaaa aaaaggctca aaaaaagagt atgctgggcc aaaaatctgg
 180
 cccctcaggc ctctgacct ggaggagaaa aaggggcccc aagccccccg ttgcccccat
 240
 ctccatattg aatggcaciaa cccctcgagg ggaaccccc cctaaccata gttctaaaaa
 300
 ggggacaaaa aaatgggcgc tggatttttc aacgcgggaa acccaattcc caccacctgg
 360
 ccggccgttc ttagggattc caacttgga cccaacctgg gcgtattctg ggccttactt
 420
 gtttcttggt ggaattggta ttccgttccc atttccccca cttccaacc c
 471

<210> 6232

<211> 138

<212> PRT

<213> Homo sapiens

<400> 6232

Met	Ser	Thr	Asn	Asp	Arg	Pro	Tyr	Ser	Gln	Pro	Leu	His	Ser	Ser	Leu
1				5					10					15	
Gly	Asp	Arg	Thr	Arg	Pro	Cys	Leu	Phe	Lys	Lys	Lys	Lys	Lys	Ala	Gln
			20					25						30	
Lys	Lys	Ser	Met	Leu	Gly	Gln	Lys	Ser	Gly	Pro	Ser	Gly	Leu	Leu	Thr
		35				40						45			
Trp	Arg	Arg	Lys	Arg	Gly	Pro	Lys	Pro	Pro	Val	Ala	Pro	Ile	Ser	Ile
	50				55					60					
Trp	Asn	Gly	Thr	Thr	Pro	Arg	Gly	Glu	Pro	Pro	Asn	His	Ser	Ser	
65					70				75					80	
Lys	Lys	Gly	Thr	Lys	Lys	Trp	Ala	Leu	Asp	Phe	Ser	Thr	Pro	Glu	Thr
			85					90						95	
Gln	Phe	Pro	Pro	Pro	Gly	Arg	Pro	Phe	Leu	Gly	Ile	Pro	Thr	Trp	Asp
		100					105						110		
Pro	Thr	Trp	Ala	Tyr	Ser	Gly	Pro	Tyr	Leu	Phe	Leu	Val	Gly	Ile	Gly
		115				120						125			
Ile	Pro	Phe	Pro	Phe	Pro	Pro	Pro	Ser	Asn						
	130					135									

<210> 6233

<211> 894

<212> DNA

<213> Homo sapiens

<400> 6233

acgcgtgaag ggaaaaagag aaggcgctgt cccgctcttg ctacggtggc ctggaggagt
 60
 ggcgaaccg gaacagagaa tttatcactt ctgggactca cagtcgtgat gtctttcaag
 120
 aggaaggag acgattggag tcaactcaat gtgctcaaaa aaagaagagt cggggacctc
 180
 ctagecagtt acattccaga ggatgaggcg ctgatgcttc gggatggacg ctttgcttgt
 240
 gccatctgcc cccatcgacc ggtactggac accctggcca tgctgactgc ccaccgtgca
 300

ggcaagaaac atctgtccag cttgcagctt ttctatggca agaagcagcc gggaaaggaa
 360
 agaaagcaga atccaaaaca tcagaatgaa ttgagaaggg aagaaaccaa agctgaggt
 420
 ccttgctaa ctcagacacg acttatcacc cagagtgtc tgcacagagc tccccactat
 480
 aacagttgct gccgccggaa gtacagacca gaagccctg gtcctctgt ctcctttcc
 540
 cctatgccac cctcagaggt caaactccaa agtggaaga tcagtaggga acctgaacct
 600
 gcggctggcc cacaggccga ggagtcagca actgtctcag ccctgcacc catgagcccc
 660
 acaagaagac gagccctgga ccattatctc acccttcgaa gctctggatg gatcccagat
 720
 ggacgaggtc gatgggtaaa agatgaaaat gttgagtttg actctgatga ggaggaacca
 780
 cctgatctcc ccttggaactg ataccctttt cccattcatt cacaataaaa ttacaatggg
 840
 tgctgagaac ttaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
 894

<210> 6234

<211> 230

<212> PRT

<213> Homo sapiens

<400> 6234

Met	Ser	Phe	Lys	Arg	Glu	Gly	Asp	Asp	Trp	Ser	Gln	Leu	Asn	Val	Leu
1				5					10					15	
Lys	Lys	Arg	Arg	Val	Gly	Asp	Leu	Leu	Ala	Ser	Tyr	Ile	Pro	Glu	Asp
			20					25					30		
Glu	Ala	Leu	Met	Leu	Arg	Asp	Gly	Arg	Phe	Ala	Cys	Ala	Ile	Cys	Pro
		35					40				45				
His	Arg	Pro	Val	Leu	Asp	Thr	Leu	Ala	Met	Leu	Thr	Ala	His	Arg	Ala
		50				55					60				
Gly	Lys	Lys	His	Leu	Ser	Ser	Leu	Gln	Leu	Phe	Tyr	Gly	Lys	Lys	Gln
65				70						75				80	
Pro	Gly	Lys	Glu	Arg	Lys	Gln	Asn	Pro	Lys	His	Gln	Asn	Glu	Leu	Arg
				85					90					95	
Arg	Glu	Glu	Thr	Lys	Ala	Glu	Ala	Pro	Leu	Leu	Thr	Gln	Thr	Arg	Leu
			100					105						110	
Ile	Thr	Gln	Ser	Ala	Leu	His	Arg	Ala	Pro	His	Tyr	Asn	Ser	Cys	Cys
		115					120					125			
Arg	Arg	Lys	Tyr	Arg	Pro	Glu	Ala	Pro	Gly	Pro	Ser	Val	Ser	Leu	Ser
		130				135					140				
Pro	Met	Pro	Pro	Ser	Glu	Val	Lys	Leu	Gln	Ser	Gly	Lys	Ile	Ser	Arg
145					150					155				160	
Glu	Pro	Glu	Pro	Ala	Ala	Gly	Pro	Gln	Ala	Glu	Glu	Ser	Ala	Thr	Val
				165				170						175	
Ser	Ala	Pro	Ala	Pro	Met	Ser	Pro	Thr	Arg	Arg	Arg	Ala	Leu	Asp	His
			180					185					190		
Tyr	Leu	Thr	Leu	Arg	Ser	Ser	Gly	Trp	Ile	Pro	Asp	Gly	Arg	Gly	Arg
		195					200					205			
Trp	Val	Lys	Asp	Glu	Asn	Val	Glu	Phe	Asp	Ser	Asp	Glu	Glu	Glu	Pro

210
 Pro Asp Leu Pro Leu Asp
 225
 215
 230
 220
 <210> 6235
 <211> 3427
 <212> DNA
 <213> Homo sapiens
 <400> 6235
 cctagggcgc ccgaaccgcg ggcggcgggtg gggacaatgt ggttctttgc ccgggacccg
 60
 gtccgggact ttccgttcga gctcatcccg gagccccag agggcggcct gcccgggccc
 120
 tgggccctgc accgcggccg caagaaggcc acaggcagcc ccgtgtccat cttcgtctat
 180
 gatgtgaagc ctggcgcgga agagcagacc caggtggcca aagctgcctt caagcgcttc
 240
 aaaaactctac ggcaccccaa catcctggct tacatcgatg gactggagac agaaaaatgc
 300
 ctccacgtcg tgacagaggc tgtgaccccg ttgggaatat acctcaaggc gagagtggag
 360
 gctggtggcc tgaaggagct ggagatctcc tgggggctac accagatcgt gaaagccctc
 420
 agcttcctgg tcaacgactg cagcctcatc cacaacaatg tctgcatggc cgccgtgttc
 480
 gtggaccgag ctggcgagtg gaagcttggg ggcctggact acatgtattc ggcccagggc
 540
 aacggtgggg gacctcccg caaggggac cccgagcttg agcagtatga cccccggag
 600
 ttggctgaca gcagtggcag agtggtcaga gagaagtggc cagcagacat gtggcgcttg
 660
 ggctgcctca tttgggaagt cttcaatggg cccctacctc gggcagcagc cctacgcaac
 720
 cctgggaaga tccccaaaac gctggtgccc cattactgtg agctggtggg agcaaaccac
 780
 aaagtacgtc ccaaccagc ccgcttcctg cagaactgcc gggcacctgg tggcttcagt
 840
 agcaaccgct ttgtggagac caacctgttc ctggaggaga ttcagatcaa agagccagcc
 900
 gagaagcaaa aattcttcca agagctgagc aagagcctgg acgcattccc tgaggatttc
 960
 tgtcggcaca aggtgctgcc ccagctgctg accgccttcg agttcggcaa tgctggggcc
 1020
 gttgtcctca cgcctctctt caaggtgggc aagttcctga gcgctgagga gtatcagcag
 1080
 aagatcatcc ctgtggtggt caagatgttc tcatccactg accgggccat gcgcatccgc
 1140
 ctctgcagc agatggagca gtcatccag taccttgacg agccaacagt caacaccag
 1200
 atcttcccc acgtcgtaca tggcttcctg gacaccaacc ctgccatccg ggagcagacg
 1260
 gtcaagtcca tgctgtcctt ggccccaaag ctgaacgagg ccaacctcaa tgtggagctg
 1320

atgaagcact ttgcacggct acaggccaag gatgaacagg gccccatccg ctgcaacacc
1380
acagtctgcc tgggcaaaat cggctcctac ctcagtgccta gcaccagaca cagggtcctt
1440
acctctgcct tcagccgagc cactagggac cegtttgac cgteccgggt tgcgggtgtc
1500
ctgggctttg ctgccacca caacctctac tcaatgaacg actgtgceca gaagatcctg
1560
cctgtgctct gcggtctcac tgtagatcct gagaaatccg tgcgagacca ggccttcaag
1620
gccattcgga gcttctgtc caaattggag tctgtgtcgg aggaccgac ccagctggag
1680
gaagtggaga aggatgtcca tgcagcctcc agccctggca tgggaggagc cgcagctagc
1740
tgggcaggct gggcggtagc cggggtctcc tcactcacct ccaagctgat ccgttcgcac
1800
ccaaccactg cccaacaga aaccaacatt ccccaaagac ccacgcctga aggagtctct
1860
gccccagccc ccaccctgt tcttgccacc cctacaacct caggccactg ggagacgcag
1920
gaggaggaca aggacacagc agaggacagc agcactgctg acagatggga cgacgaagac
1980
tggggcagcc tggagcagga ggccgagtct gtgctggccc agcaggacga ctggagcacc
2040
gggggccaag tgagccgtgc tagtcaggtc agcaactccg accacaaatc ctccaaatcc
2100
ccagagtccg actggagcag ctgggaagct gagggtcctt gggaacaggg ctggcaggag
2160
ccaagctccc aggagccacc tcctgacggg acacggctgg ccagcgagta taactggggg
2220
ggcccagagt ccagcgacaa gggcgacccc ttcgctaccc tgtctgcacg toccagcacc
2280
cagccgaggc cagactcttg gggtaggac aactgggagg gcctcgagac tgacagtcca
2340
caggtcaagg ctgagctggc ccggaagaag cgcgaggagc ggcggcggga gatggaggcc
2400
aaacgcgccg agagggaagg ggccaagggc cccatgaagc tgggagcccc gaagctggac
2460
tgaaccgtgg cgggtggcct tcccggctgc ggagagcccc cccacagat gtattttattg
2520
tacaaccat gtgagccccg ccggcccagc caggccatct cactgtaca taatcagagc
2580
cacaataaat tctatttcac accccttggt ccgggctcag tctagccctt gggaggcggc
2640
tggggtcttg cgcgcctgc gcagcccgcg ccacgctcag acgtgaacat caatttgctt
2700
cgaaagccaa gggtaaagag gcacgatctg atttatcagt ttctaggaaa caccctctgg
2760
gaggaaggca ggcagcgccc gccggagacc ttacaaccgc ccgctaaccg gggagggggg
2820
ccggtagggg cgctcgggt ctcaaggcgc cgggagggtc tgcgggccct gaaggctcct
2880
gggtccgagc cacaagtcgg ggcagaagtg aggccgagct cgcggaaatc cctcagtgat
2940

caccgaggtc tgggccgagg gcggcgctcg cggcgtcagc ggcggcgctg gggaacgcag
 3000
 gccccgtgcg ggcggctgcg cgcgaagccg gctttgcaga cgcagcggaa ggagccgctg
 3060
 gtgttcacgc agcgctcgct cttgcacagc agcccccgct gggttcagctc tcggcactcg
 3120
 tcgatattcca cgcagcgggc gcgggagggc tcgagctgga agccgcccgg acactcgcac
 3180
 acggcgccgc cgggccgagg cagcgagcgg ccactcacgc agcgacactc gtctgaatcc
 3240
 tcctctgaac tgtctcatc tcttgagggc ttcactccca cccaggacca gcacggttgt
 3300
 gaggaggtgg agcagcccca ccacaagaag gagtgtctacc tgaacttcga tgacacagt
 3360
 ttctgcgaca gcgtattggc caccaacgtg acccagcagg agtgctgctg ctctctgggg
 3420
 gccggcc
 3427

<210> 6236

<211> 820

<212> PRT

<213> Homo sapiens

<400> 6236

Pro	Arg	Ala	Pro	Glu	Pro	Ala	Ala	Ala	Val	Gly	Thr	Met	Trp	Phe	Phe
1			5						10					15	
Ala	Arg	Asp	Pro	Val	Arg	Asp	Phe	Pro	Phe	Glu	Leu	Ile	Pro	Glu	Pro
		20					25						30		
Pro	Glu	Gly	Gly	Leu	Pro	Gly	Pro	Trp	Ala	Leu	His	Arg	Gly	Arg	Lys
		35				40						45			
Lys	Ala	Thr	Gly	Ser	Pro	Val	Ser	Ile	Phe	Val	Tyr	Asp	Val	Lys	Pro
	50					55					60				
Gly	Ala	Glu	Glu	Gln	Thr	Gln	Val	Ala	Lys	Ala	Ala	Phe	Lys	Arg	Phe
65					70					75				80	
Lys	Thr	Leu	Arg	His	Pro	Asn	Ile	Leu	Ala	Tyr	Ile	Asp	Gly	Leu	Glu
			85					90						95	
Thr	Glu	Lys	Cys	Leu	His	Val	Val	Thr	Glu	Ala	Val	Thr	Pro	Leu	Gly
		100						105					110		
Ile	Tyr	Leu	Lys	Ala	Arg	Val	Glu	Ala	Gly	Gly	Leu	Lys	Glu	Leu	Glu
	115						120					125			
Ile	Ser	Trp	Gly	Leu	His	Gln	Ile	Val	Lys	Ala	Leu	Ser	Phe	Leu	Val
	130				135						140				
Asn	Asp	Cys	Ser	Leu	Ile	His	Asn	Asn	Val	Cys	Met	Ala	Ala	Val	Phe
145				150						155				160	
Val	Asp	Arg	Ala	Gly	Glu	Trp	Lys	Leu	Gly	Gly	Leu	Asp	Tyr	Met	Tyr
		165						170						175	
Ser	Ala	Gln	Gly	Asn	Gly	Gly	Gly	Pro	Pro	Arg	Lys	Gly	Ile	Pro	Glu
		180					185					190			
Leu	Glu	Gln	Tyr	Asp	Pro	Pro	Glu	Leu	Ala	Asp	Ser	Ser	Gly	Arg	Val
	195						200					205			
Val	Arg	Glu	Lys	Trp	Ser	Ala	Asp	Met	Trp	Arg	Leu	Gly	Cys	Leu	Ile
	210					215					220				
Trp	Glu	Val	Phe	Asn	Gly	Pro	Leu	Pro	Arg	Ala	Ala	Ala	Leu	Arg	Asn

```

225          230          235          240
Pro Gly Lys Ile Pro Lys Thr Leu Val Pro His Tyr Cys Glu Leu Val
          245          250          255
Gly Ala Asn Pro Lys Val Arg Pro Asn Pro Ala Arg Phe Leu Gln Asn
          260          265          270
Cys Arg Ala Pro Gly Gly Phe Met Ser Asn Arg Phe Val Glu Thr Asn
          275          280          285
Leu Phe Leu Glu Glu Ile Gln Ile Lys Glu Pro Ala Glu Lys Gln Lys
          290          295          300
Phe Phe Gln Glu Leu Ser Lys Ser Leu Asp Ala Phe Pro Glu Asp Phe
305          310          315          320
Cys Arg His Lys Val Leu Pro Gln Leu Leu Thr Ala Phe Glu Phe Gly
          325          330          335
Asn Ala Gly Ala Val Val Leu Thr Pro Leu Phe Lys Val Gly Lys Phe
          340          345          350
Leu Ser Ala Glu Glu Tyr Gln Gln Lys Ile Ile Pro Val Val Val Lys
          355          360          365
Met Phe Ser Ser Thr Asp Arg Ala Met Arg Ile Arg Leu Leu Gln Gln
          370          375          380
Met Glu Gln Phe Ile Gln Tyr Leu Asp Glu Pro Thr Val Asn Thr Gln
385          390          395          400
Ile Phe Pro His Val Val His Gly Phe Leu Asp Thr Asn Pro Ala Ile
          405          410          415
Arg Glu Gln Thr Val Lys Ser Met Leu Leu Leu Ala Pro Lys Leu Asn
          420          425          430
Glu Ala Asn Leu Asn Val Glu Leu Met Lys His Phe Ala Arg Leu Gln
          435          440          445
Ala Lys Asp Glu Gln Gly Pro Ile Arg Cys Asn Thr Thr Val Cys Leu
          450          455          460
Gly Lys Ile Gly Ser Tyr Leu Ser Ala Ser Thr Arg His Arg Val Leu
465          470          475          480
Thr Ser Ala Phe Ser Arg Ala Thr Arg Asp Pro Phe Ala Pro Ser Arg
          485          490          495
Val Ala Gly Val Leu Gly Phe Ala Ala Thr His Asn Leu Tyr Ser Met
          500          505          510
Asn Asp Cys Ala Gln Lys Ile Leu Pro Val Leu Cys Gly Leu Thr Val
          515          520          525
Asp Pro Glu Lys Ser Val Arg Asp Gln Ala Phe Lys Ala Ile Arg Ser
          530          535          540
Phe Leu Ser Lys Leu Glu Ser Val Ser Glu Asp Pro Thr Gln Leu Glu
545          550          555          560
Glu Val Glu Lys Asp Val His Ala Ala Ser Ser Pro Gly Met Gly Gly
          565          570          575
Ala Ala Ala Ser Trp Ala Gly Trp Ala Val Thr Gly Val Ser Ser Leu
          580          585          590
Thr Ser Lys Leu Ile Arg Ser His Pro Thr Thr Ala Pro Thr Glu Thr
          595          600          605
Asn Ile Pro Gln Arg Pro Thr Pro Glu Gly Val Pro Ala Pro Ala Pro
610          615          620
Thr Pro Val Pro Ala Thr Pro Thr Thr Ser Gly His Trp Glu Thr Gln
625          630          635          640
Glu Glu Asp Lys Asp Thr Ala Glu Asp Ser Ser Thr Ala Asp Arg Trp
          645          650          655
Asp Asp Glu Asp Trp Gly Ser Leu Glu Gln Glu Ala Glu Ser Val Leu

```


660 665 670
 Ala Gln Gln Asp Asp Trp Ser Thr Gly Gly Gln Val Ser Arg Ala Ser
 675 680 685
 Gln Val Ser Asn Ser Asp His Lys Ser Ser Lys Ser Pro Glu Ser Asp
 690 695 700
 Trp Ser Ser Trp Glu Ala Glu Gly Ser Trp Glu Gln Gly Trp Gln Glu
 705 710 715 720
 Pro Ser Ser Gln Glu Pro Pro Pro Asp Gly Thr Arg Leu Ala Ser Glu
 725 730 735
 Tyr Asn Trp Gly Gly Pro Glu Ser Ser Asp Lys Gly Asp Pro Phe Ala
 740 745 750
 Thr Leu Ser Ala Arg Pro Ser Thr Gln Pro Arg Pro Asp Ser Trp Gly
 755 760 765
 Glu Asp Asn Trp Glu Gly Leu Glu Thr Asp Ser Arg Gln Val Lys Ala
 770 775 780
 Glu Leu Ala Arg Lys Lys Arg Glu Glu Arg Arg Arg Glu Met Glu Ala
 785 790 795 800
 Lys Arg Ala Glu Arg Lys Val Ala Lys Gly Pro Met Lys Leu Gly Ala
 805 810 815
 Arg Lys Leu Asp
 820

<210> 6237
 <211> 494
 <212> DNA
 <213> Homo sapiens

<400> 6237
 cggcctggga ccattggcgg acatgttccc gatttgaggt gaaacatgaa gagaaaatag
 60
 aataacttaat aatgcttttc cgcaaccgct tcttgctgct gctggccctg gctgcgctgc
 120
 tggcctttgt gagcctcagc ctgcagttct tccacctgat cccggtgtcg actcctaaga
 180
 atggaatgag tagcaagagt cgaaagagaa tcatgcccga ccctgtgacg gagccccctg
 240
 tgacagaccc cgtttatgaa gctcttttgt actgcaacat cccagcgtg gccgagcgca
 300
 gcatggaagg tcatgccccg catcatttta agctgggtctc agtgcattgtg ttcattcgcc
 360
 acggagacag gtaccactg tatgtcattc ccaaaacaaa gcgaccagaa attgactgca
 420
 ctctgggtggc taacaggaaa ccgtatcacc caaaactgga agcttttcatt agtcacatgt
 480
 tgagaggatc cgga
 494

<210> 6238
 <211> 141
 <212> PRT
 <213> Homo sapiens

<400> 6238
 Met Leu Phe Arg Asn Arg Phe Leu Leu Leu Leu Ala Leu Ala Ala Leu

1	5	10	15
Leu Ala Phe Val Ser Leu Ser Leu Gln Phe Phe His Leu Ile Pro Val			
20	25	30	
Ser Thr Pro Lys Asn Gly Met Ser Ser Lys Ser Arg Lys Arg Ile Met			
35	40	45	
Pro Asp Pro Val Thr Glu Pro Pro Val Thr Asp Pro Val Tyr Glu Ala			
50	55	60	
Leu Leu Tyr Cys Asn Ile Pro Ser Val Ala Glu Arg Ser Met Glu Gly			
65	70	75	80
His Ala Pro His His Phe Lys Leu Val Ser Val His Val Phe Ile Arg			
85	90	95	
His Gly Asp Arg Tyr Pro Leu Tyr Val Ile Pro Lys Thr Lys Arg Pro			
100	105	110	
Glu Ile Asp Cys Thr Leu Val Ala Asn Arg Lys Pro Tyr His Pro Lys			
115	120	125	
Leu Glu Ala Phe Ile Ser His Met Leu Arg Gly Ser Gly			
130	135	140	

<210> 6239
 <211> 911
 <212> DNA
 <213> Homo sapiens

<400> 6239
 nnggcgggtt aaagagcgcg ttgctggctg ggcacgcgtg cttgagaagg ttcaatggcg
 60
 tggcagggac tagcggccga gtctctgcag gtgccggcgg tgacgcgggc ttacaccgca
 120
 gcctgtgtcc tcaccaccgc cgcggtgcag ctggagctcc tcagcccctt tcaactctac
 180
 ttcaaccgc accttgtgtt ccggaagttc caggtctgga ggctcgtcac caacttcctc
 240
 ttcttcgggc ccttgggatt cagcttcttc ttcaacatgc tcttcgtgtt ccgctactgc
 300
 cgcgtgctgg aagagggctc ctccgcggc cgcacggcgg acttcgtctt catgtttctc
 360
 ttccggggcg tccttatgac cctgctggga ctcttggga gcctgttctt cctggggcag
 420
 gccctcatgg ccattgctgt gtacgtgtgg agccgcgcga gccctcgggt gagggccaac
 480
 ttcttcgggc tgctcacttt ccaggcaccg ttcttgcctt gggcgtcat gggcttctcg
 540
 ctgctgctgg gcaactccat cctcgtggac ctgctgggga ttgcggtggg ccatactac
 600
 tacttcctgg aggacgtctt cccaaccag cctggaggca agaggctcct gcagaccct
 660
 ggcttcctaa agctgtcctt ggatgccct gcagaagacc ccaattacct gccctcctc
 720
 gaggaacagc caggacccca tctgccacc cgcagcagt gacccacc cagggccagg
 780
 cctaagaggc ttctggcagc ttccatccta cccatgacc ctacttgggg cagaaaaaac
 840
 ccacctaataa ggctggggcc atgcaagggc ccacctgaat aaacagaatg agctgcaaaa
 900

aaaaaaaaa a
911

<210> 6240
<211> 235
<212> PRT
<213> Homo sapiens

<400> 6240
Met Ala Trp Gln Gly Leu Ala Ala Glu Phe Leu Gln Val Pro Ala Val
1 5 10 15
Thr Arg Ala Tyr Thr Ala Ala Cys Val Leu Thr Thr Ala Ala Val Gln
20 25 30
Leu Glu Leu Leu Ser Pro Phe Gln Leu Tyr Phe Asn Pro His Leu Val
35 40 45
Phe Arg Lys Phe Gln Val Trp Arg Leu Val Thr Asn Phe Leu Phe Phe
50 55 60
Gly Pro Leu Gly Phe Ser Phe Phe Asn Met Leu Phe Val Phe Arg
65 70 75 80
Tyr Cys Arg Met Leu Glu Glu Gly Ser Phe Arg Gly Arg Thr Ala Asp
85 90 95
Phe Val Phe Met Phe Leu Phe Gly Gly Val Leu Met Thr Leu Leu Gly
100 105 110
Leu Leu Gly Ser Leu Phe Phe Leu Gly Gln Ala Leu Met Ala Met Leu
115 120 125
Val Tyr Val Trp Ser Arg Arg Ser Pro Arg Val Arg Val Asn Phe Phe
130 135 140
Gly Leu Leu Thr Phe Gln Ala Pro Phe Leu Pro Trp Ala Leu Met Gly
145 150 155 160
Phe Ser Leu Leu Leu Gly Asn Ser Ile Leu Val Asp Leu Leu Gly Ile
165 170 175
Ala Val Gly His Ile Tyr Tyr Phe Leu Glu Asp Val Phe Pro Asn Gln
180 185 190
Pro Gly Gly Lys Arg Leu Leu Gln Thr Pro Gly Phe Leu Lys Leu Leu
195 200 205
Leu Asp Ala Pro Ala Glu Asp Pro Asn Tyr Leu Pro Leu Pro Glu Glu
210 215 220
Gln Pro Gly Pro His Leu Pro Pro Pro Gln Gln
225 230 235

<210> 6241
<211> 1515
<212> DNA
<213> Homo sapiens

<400> 6241
tgccggccgct gccttgacc cagcgccacc cgcacacggc gctccgctag ccaggccggg
60
agcaagagcc aggcggtgga gaagccgccg tcggagaagc cgcggtgag gcgctcgtcg
120
cgccggggccc caggaggagg gccgggggag ccgccgccgc ctgagctggc gttgctcccg
180
ccaccgccgc cgccgccgcc gactcccgcg accccgacgt cctcggcgtc caacctggac
240

ctgggcgagc agcgggacgc ctgggagacg ttccagaagc ggcagaagct tacctccgag
 300
 ggtgccgcca agctcctgct agacaccttt gaataccagg gcctggtgaa gcacacagga
 360
 ggctgccact gtggagcagt tcgttttgaa gtttgggcct cagcagactt gcatatattt
 420
 gactgcaatt gcagcatttg caagaagaag cagaatagac acttcattgt tccagcttct
 480
 cgcttcaagc tcttgaaggg agctgagcac ataacgactt acacgttcaa tactcacaaa
 540
 gccagcata ccttctgtaa gagatgtggc gttcagagct tctatactcc acgatcaaac
 600
 cccggaggct tcggaattgc cccccactgc ctggatgagg gcactgtgcg gagtatggtc
 660
 actgaggaat tcaatggcag cgattgggag aaggccatga aagagcacia gaccatcaag
 720
 aacatgtcta aagagtgcgc ttctgcctct cctgccctga aaaggaggaa tgattggggc
 780
 cagcaacttt gctctccctg ccgtgcctcg gtgggtgctcc tgaatgtggc tgacctgggc
 840
 tgctgggtcc gttgactagg gtcacttga tctctgcagt ttgctccagc taccagtttc
 900
 tttaggcagc tctttgtcct cctctgccc agattttgat gtagtctaata tgacatcctt
 960
 ctcttcccaa cttttgtgtg atccagcaga gcatgtgaga ctctttgata tgcaccttca
 1020
 tgtattatct tgttcagttc tctgaggttg ggatcattat tatttcccat tttgcagatg
 1080
 agagaattga ggcagagaaa ggttcagcac cttgcctttg gttacacagc tggtcattct
 1140
 ggcttcaatc gcaggactac cagcctgtgc tcttcaccac ttagcttccc tgactcaggc
 1200
 cacttccctg gagcgttagc tggattctga gagtagtttc caagccagag ctttcagaga
 1260
 gctttgttgc gtaggacaat tttaagacat caggttcttg aatgttttgt gtttttttaa
 1320
 gtctcagatt tatcttccca ctctctactt ctccaaaaag actgagagct gacatatttg
 1380
 attgtaagct ctttgaggca gagttcttgc aatcgtctct gtataaaaca gtgcccaccc
 1440
 cagtgcctg tacttgatg cttcaatcag agctgtcctg ttaaatagag caagtttttc
 1500
 ctagaccac attct
 1515

<210> 6242

<211> 245

<212> PRT

<213> Homo sapiens

<400> 6242

Cys Gly Arg Cys Leu Gly Pro Ser Ala Thr Arg Thr Arg Arg Ser Ala
 1 5 10 15
 Ser Gln Ala Gly Ser Lys Ser Gln Ala Val Glu Lys Pro Pro Ser Glu

```

      20      25      30
Lys Pro Arg Leu Arg Arg Ser Ser Arg Arg Ala Pro Gly Gly Gly Pro
      35      40      45
Gly Glu Pro Pro Pro Pro Glu Leu Ala Leu Leu Pro Pro Pro Pro
      50      55      60
Pro Pro Pro Thr Pro Ala Thr Pro Thr Ser Ser Ala Ser Asn Leu Asp
65      70      75      80
Leu Gly Glu Gln Arg Asp Ala Trp Glu Thr Phe Gln Lys Arg Gln Lys
      85      90      95
Leu Thr Ser Glu Gly Ala Ala Lys Leu Leu Asp Thr Phe Glu Tyr
      100      105      110
Gln Gly Leu Val Lys His Thr Gly Gly Cys His Cys Gly Ala Val Arg
      115      120      125
Phe Glu Val Trp Ala Ser Ala Asp Leu His Ile Phe Asp Cys Asn Cys
      130      135      140
Ser Ile Cys Lys Lys Lys Gln Asn Arg His Phe Ile Val Pro Ala Ser
145      150      155      160
Arg Phe Lys Leu Leu Lys Gly Ala Glu His Ile Thr Thr Tyr Thr Phe
      165      170      175
Asn Thr His Lys Ala Gln His Thr Phe Cys Lys Arg Cys Gly Val Gln
      180      185      190
Ser Phe Tyr Thr Pro Arg Ser Asn Pro Gly Gly Phe Gly Ile Ala Pro
      195      200      205
His Cys Leu Asp Glu Gly Thr Val Arg Ser Met Val Thr Glu Glu Phe
      210      215      220
Asn Gly Ser Asp Trp Glu Lys Ala Met Lys Glu His Lys Thr Ile Lys
225      230      235      240
Asn Met Ser Lys Glu
      245

```

<210> 6243

<211> 326

<212> DNA

<213> Homo sapiens

<400> 6243

```

gcgcgccagg gagagaagga gaggaactga tggaacaaag tcaaagagga agtgggataa
60
gataggacat aaggacacgt ggagcattca gatccagaga ggatgatcag cacctcttcc
120
tctgagacca gagggacaaa ccataatgag tgaagagatg aggacattct taaagtggag
180
ctagcaaagc tgggaatggc cttccacaag aggaaaccta agactggacc cagaatagta
240
aagggtgggtt tggggacttg aggcaagtga gaaagctctg gaaatgccgc tggataaatt
300
ctgtagggat gcattcctgg agagtg
326

```

<210> 6244

<211> 104

<212> PRT

<213> Homo sapiens

<400> 6244

```

Met His Pro Tyr Arg Ile Tyr Pro Ala Ala Phe Pro Glu Leu Ser His
 1           5           10           15
Leu Pro Gln Val Pro Lys Pro Thr Phe Thr Ile Leu Gly Pro Val Leu
 20           25           30
Gly Phe Leu Leu Trp Lys Ala Ile Pro Ser Phe Ala Ser Ser Thr Leu
 35           40           45
Arg Met Ser Ser Ser Leu His Ser Leu Trp Phe Val Pro Leu Val Ser
 50           55           60
Glu Glu Glu Val Leu Ile Ile Leu Ser Gly Ser Glu Cys Ser Thr Cys
 65           70           75           80
Pro Tyr Val Leu Ser Tyr Pro Thr Ser Ser Leu Thr Leu Phe His Gln
 85           90           95
Phe Leu Ser Phe Ser Pro Trp Arg
 100

```

<210> 6245

<211> 6609

<212> DNA

<213> Homo sapiens

<400> 6245

```

tctggagtct gcctcatttt gaatatatct ctctgggtctt tgggctgctg attttaaaat
60
aagttcttgg ttcaagtcaa cctgttactt gccattggat ggtaatatatt gacttttcaa
120
tcttatcctg attgataagc ggactcccag tttttgcctt ctctttgccc cagaatttgg
180
agacctcggg cctctccctt gcttttctcc tctttcctag atttttctcaa gtgtcccgct
240
ttagtcttcc ctctcagct tggtcctga gaacatttgc tgctgctttt gttttttag
300
gtgttggaca atcagataaa gaaagacctg gctgacaagg agacactgga gaacatgatg
360
cagagacacg aggaggaggc ccatgagaag ggcaaaattc tcagcgaaca gaaggcgatg
420
atcaatgcta tggattccaa gatcagatcc ctggaacaga ggattgtgga actgtctgaa
480
gccaataaac ttgcagcaaa tagcagtctt tttacccaaa ggaacatgaa ggcccaagaa
540
gagatgattt ctgaactcag gcaacagaaa ttttacctgg agacacaggc tgggaagttg
600
gaggcccaga accgaaaact ggaggagcag ctggagaaga tcagccacca agaccacagt
660
gacaagaatc ggctgctgga actggagaca agattgctgg aggtcagtct agagcacgag
720
gagcagaaac tggagctcaa gcgccagctc acagagctac agctctccct gcaggagcgc
780
gagtcacagt tgacagccct gcaggctgca cgggcggccc tggagagcca gcttcgccag
840
gcgaagacag agctggaaga gaccacagca gaagctgaag aggagatcca ggcactcacg
900
gcacatagag atgaaatcca gcgcaaattt gatgctcttc gtaacagctg tactgtaatc
960

```

acagacctgg aggagcagct aaaccagctg accgaggaca acgctgaact caacaaccaa
1020
aacttctact tgtccaaaca actcgatgag gcttctggcg ccaacgacga gattgtacaa
1080
ctgcgaagtg aagtggacca tctccgccgg gagatcacgg aacgagagat gcagcttacc
1140
agccagaagc aaacgatgga ggctctgaag accacgtgca ccatgctgga ggaacaggtc
1200
atggatttgg aggccctaaa cgatgagctg ctagaaaaag agcggcagtg ggaggcctgg
1260
aggagcgtcc tgggtgatga gaaatcccag tttagtgtgc gggttcgaga gctgcagaga
1320
atgctggaca ccgagaaaca gagcagggcg agagccgac agcggatcac cgagtctcgc
1380
cagggtggtg agctggcagt gaaggagcac aaggctgaga ttctcgtct gcagcaggct
1440
ctcaaagagc agaagctgaa ggccgagagc ctctctgaca agctcaatga cctggagaag
1500
aagcatgcta tgcttgaaat gaatgcccga agcttacagc agaagctgga gactgaacga
1560
gagctcaaac agaggcttct ggaagagcaa gccaaattac agcagcagat ggacctgcag
1620
aaaaatcaca ttttcgtct gactcaagga ctgcaagaag ctctagatcg ggctgatcta
1680
ctgaagacag aaagaagtga cttggagtat cagctggaaa acattcaggt tctctattct
1740
catgaaaagg tgaaaatgga aggcactatt tctcaacaaa ccaaactcat tgattttctg
1800
caagccaaaa tggaccaacc tgctaaaaag aaaaagggtc ctctgcagta caatgagctg
1860
aagctggccc tggagaagga gaaagctcgc tgtgcagagc tagaggaagc ccttcagaag
1920
accgcgctcg agctccggtc cgcccgaggag gaagctgccc accgcaaagc aacggaccac
1980
ccacacccat ccacgccagc caccgagagg cagcagatcg ccatgtctgc catcgtgcgg
2040
tcgccagagc accagcccag tgccatgagc ctgctggccc cgccatccag ccgcagaaag
2100
gagtcttcaa ctccagagga atttagtcgg cgtcttaagg aacgcatgca ccacaatatt
2160
cctcaccgat tcaacgtagg actgaacatg cgagccacaa agtgtgctgt gtgtctggat
2220
accgtgcact ttggacgcca ggcattccaa tgtctcgaat gtcaggtgat gtgtcacccc
2280
aagtgtccca cgtgcttgcc agccacctgc ggcttgccctg ctgaatatgc cacacacttc
2340
accgaggcct tctgccgtga caaaatgaac tccccaggtc tccagaccaa ggagcccagc
2400
agcagcttgc acctggaagg gtggatgaag gtgcccagga ataacaaacg aggacagcaa
2460
ggctgggaca ggaagtacat tgtcctggag ggatcaaaag tcctcattta tgacaatgaa
2520
gccagagaag ctggacagag gccggtggaa gaatttgagc tgtgccttcc cgacggggat
2580

gtatctattc atggtgccgt tgggtgcttc gaactcgcaa atacagccaa agcagatgtc
2640
ccatacatat tgaagatgga atctcaccgc cacaccacct gctggcccgg gagaaccctc
2700
tacttgctag ctcccagctt ccctgacaaa cagcgctggg tcaccgcctt agaatcagtt
2760
gtcgcagggtg ggagagtctt tagggaaaaa gcagaagctg atgctaaact gcttggaaac
2820
tccctgctga aactggaagg tgatgaccgt ctagacatga actgcacgct gcccttcagt
2880
gaccagggtg tggtgggtgg caccgaggaa gggctctacg ccctgaatgt cttgaaaaac
2940
tccctaacc atgtcccagg aattggagca gtcttccaaa tttatattat caaggacctg
3000
gagaagctac tcatgatagc aggagaagag cgggcactgt gtcttggtga cgtgaagaaa
3060
gtgaaacagt ccctggccca gtcccacctg cctgcccagc ccgacatctc acccaacatt
3120
tttgaagctg tcaagggtcg ccacttgttt ggggcaggca agattgagaa cgggctctgc
3180
atctgtgcag ccattgcccag caaagtcgtc attctccgct acaacgaaaa cctcagcaaa
3240
tactgcatec ggaaagagat agagacctca gagccctgca gctgtatcca cttaccaat
3300
tacagtatcc tcattggaac caataaatc tacgaaatcg acatgaagca gtacacgctc
3360
gaggaattcc tggataagaa tgaccattcc ttggcacctg ctgtgtttgc cgcctcttcc
3420
aacagcttcc ctgtctcaat cgtgcagggtg aacagcgagc ggcagcgaga ggagtacttg
3480
ctgtgtttcc acgaatttgg agtggttcgtg gattcttacg gaagacgtag ccgcacagac
3540
gatctcaagt ggagtcgctt acctttggcc ttgacctaca gagaacccta tctgtttgtg
3600
accacttca actcactcga agtaattgag atccaggcac gctcctcagc agggaccctc
3660
gcccagagct acctggacat cccgaaccgc cgctacctgg gccctgccat ttcctcagga
3720
gcgatttact tggcgctctc ataccaggat aaattaaggc tcatttgctg caagggaaac
3780
ctcgtgaagg agtcggcac tgaacaccac cggggcccg ccaacctccg cagcagcccc
3840
aacaagcgag gcccacccac gtacaacgag cacatcacca agcgcgtggc ctccagccca
3900
gcgcccgcgc aaggccccag ccacccgcga gagccaagca cccccaccg ctaccgcgag
3960
gggcccgcgc agctgcgcag ggacaagtct cctggccgcc ccctggagcg agagaagtcc
4020
cccggccgga tgctcagcac gcggagagag cggccccgc ggaggctgtt tgaagacagc
4080
agcaggggccc ggtgcctgc gggagccgtg aggacccgc tgtccaggt gaacaaggtc
4140
tgggaccagt cttcagtata aatctcagcc agaaaaacca actcctcatc ttgatctgca
4200

ggaaaacacc aaacacacta tggaactctg ctgatgggga cccaagcgcc cacgtgctca
4260
gccaccctct ggctcagcgg ggcccagacc cacctcgga cggacacccc tgtctccagg
4320
aggggcaggt ggctgaggct ctteggagct gtcagcgccc ggtgcctgcc ctgggcacct
4380
ccctgcagtc atctctttgc actttgttac tctttcaaag cattcacaaa cttttgtacc
4440
tagctctagc ctgtaccagt tagttcatca aaggaaacca accgggatgc taactacaac
4500
atggttagaa tcctaattag ctactttaag atcctaggat tggttggttt ttcttttttt
4560
ttctcttttg ttcttttctt tttttttttt tttttttaag acaacagaat tcttaataga
4620
tttgaatagc gacgtatttc ctgttgtagt ctttttttagc tcgaccacat catcaggtct
4680
ttgccaccga ggcatagtgt agaacagtcc cggtcagttg gccaacctcc cgcagccaag
4740
taggttcac cttgttctgt ttcattctca tagatggccc tgctttcccc agggtgacat
4800
cgtagccaaa tgtttactgt ttccattgcc ttttatggcc ttgacgactt cccctcccac
4860
cagctgagaa tgtatggagg tcateggggc ctcagctcgg aggcagtgac ttggggccaa
4920
gggacctcga gacgctttcc ttcccccccc cccagcgtca tctccccagc ctgctgttcc
4980
cgctttccat atagctttgg ccaggaaagc atgcaataga cttgctcgga gccagcact
5040
cctgggtctc ggggtcgggg aggggacggg ggcacccact tccttgtctg tgacggcgtg
5100
ttgttcccc a tcttgggatg gggaagaggc ccgtcgggag ttctgcatgg cagttcactg
5160
catgtgctgc ccccttgggt tgctctgcca atgtattaat accatcccat agctcctgcc
5220
aaatcgagac cctctgacga cttgccgact aactggccac cacaagctgc agtctgtagc
5280
actgaacaaa caaaaaacaa aacgctcaag ccttacgacc agagaaggat ttcagcaaac
5340
caccacctcc caetcagtgt cccctccaaa cttcacactt ccctgctgc agaggatgac
5400
tctgttcaca cccaatccag cgcggttcta cccaacgaaa ctgtgacttt ccaaattgagc
5460
ctttccctag ggctagacct aagaccagga agtttgagag agcagccgca gctcaactct
5520
tccagctccg ccagggttgg gaagtctta ggtgcagtgc ggetccact gggctcttgcg
5580
gacctctcta ttagagtacg aaattcctgg caactggtat agaaccaacc tagaggcttt
5640
gcagttggca agctaactcg cggccttatt tctgcctta atctcccaca aggcactctgt
5700
tgctttgggt cctccacgac tcttaggccc gcctcaacaa cccaggcacc tcctaggtag
5760
gctcaaaggt agaccggtt ccaccgcagc aggtgaacat gaccgtgttt tcaactgtgt
5820

ccacagtcca gatcccttcc cagattgcaa cctggcctgc atcccagctc cttcctgctc
 5880
 gtgtcttaac ctaagtgttt tcttggttga aacgcctaca aacctccatg tggtagctcc
 5940
 ttgggcaaat gtctgtgtgt ggcgttttat gtgttgcttg gagtctgtgg ggtcgtactc
 6000
 cctccccctc cgtccccagg gcagatttga ttgaatgttt gctgaagttt tgtctcttgg
 6060
 tccacagtat ttggaaaggt cactgaaaat gggctctttca gtcttggtcat ttcatttagg
 6120
 atctccatga gaaatgggct tcttgagccc tgaaaatgta tattgtgtgt ctcactgtgt
 6180
 aactgctttc tgctatatag aactagctca aaagactgta catatttaca agaaacttta
 6240
 tattcgtaaa aaaaaaaaga ggaaattgaa ttggtttcta cttttttatt gtaaaagggtg
 6300
 catttttcaa cacttacttt tggtttcaat ggtggtagtt gtggacagcc atcttcaactg
 6360
 gaggggtgggg agctccgtgt gaccaccaag atgccagcag gatataccgt aacacgaaat
 6420
 tgetgtcaaa agcttatttag catcaatcaa gattctaggt ctccaaaagt acaggctttt
 6480
 tcttcattac cttttttatt cagaacgagg aagagaacac aaggaatgat tcaagatcca
 6540
 ccttgagagg aatgaacttt gttgttgaa aattagttaa ataaagcaat gatctaaact
 6600
 aaaaaaaaaa
 6609

<210> 6246
 <211> 1286
 <212> PRT
 <213> Homo sapiens

<400> 6246
 Val Leu Asp Asn Gln Ile Lys Lys Asp Leu Ala Asp Lys Glu Thr Leu
 1 5 10 15
 Glu Asn Met Met Gln Arg His Glu Glu Glu Ala His Glu Lys Gly Lys
 20 25 30
 Ile Leu Ser Glu Gln Lys Ala Met Ile Asn Ala Met Asp Ser Lys Ile
 35 40 45
 Arg Ser Leu Glu Gln Arg Ile Val Glu Leu Ser Glu Ala Asn Lys Leu
 50 55 60
 Ala Ala Asn Ser Ser Leu Phe Thr Gln Arg Asn Met Lys Ala Gln Glu
 65 70 75 80
 Glu Met Ile Ser Glu Leu Arg Gln Gln Lys Phe Tyr Leu Glu Thr Gln
 85 90 95
 Ala Gly Lys Leu Glu Ala Gln Asn Arg Lys Leu Glu Glu Gln Leu Glu
 100 105 110
 Lys Ile Ser His Gln Asp His Ser Asp Lys Asn Arg Leu Leu Glu Leu
 115 120 125
 Glu Thr Arg Leu Arg Glu Val Ser Leu Glu His Glu Glu Gln Lys Leu
 130 135 140
 Glu Leu Lys Arg Gln Leu Thr Glu Leu Gln Leu Ser Leu Gln Glu Arg

145		150		155		160
Glu Ser Gln Leu Thr Ala Leu Gln Ala Ala Arg Ala Ala Leu Glu Ser						
	165		170		175	
Gln Leu Arg Gln Ala Lys Thr Glu Leu Glu Thr Thr Ala Glu Ala						
	180		185		190	
Glu Glu Glu Ile Gln Ala Leu Thr Ala His Arg Asp Glu Ile Gln Arg						
	195		200		205	
Lys Phe Asp Ala Leu Arg Asn Ser Cys Thr Val Ile Thr Asp Leu Glu						
	210		215		220	
Glu Gln Leu Asn Gln Leu Thr Glu Asp Asn Ala Glu Leu Asn Asn Gln						
	225		230		235	
Asn Phe Tyr Leu Ser Lys Gln Leu Asp Glu Ala Ser Gly Ala Asn Asp						
	245		250		255	
Glu Ile Val Gln Leu Arg Ser Glu Val Asp His Leu Arg Arg Glu Ile						
	260		265		270	
Thr Glu Arg Glu Met Gln Leu Thr Ser Gln Lys Gln Thr Met Glu Ala						
	275		280		285	
Leu Lys Thr Thr Cys Thr Met Leu Glu Glu Gln Val Met Asp Leu Glu						
	290		295		300	
Ala Leu Asn Asp Glu Leu Leu Glu Lys Glu Arg Gln Trp Glu Ala Trp						
	305		310		315	
Arg Ser Val Leu Gly Asp Glu Lys Ser Gln Phe Glu Cys Arg Val Arg						
	325		330		335	
Glu Leu Gln Arg Met Leu Asp Thr Glu Lys Gln Ser Arg Ala Arg Ala						
	340		345		350	
Asp Gln Arg Ile Thr Glu Ser Arg Gln Val Val Glu Leu Ala Val Lys						
	355		360		365	
Glu His Lys Ala Glu Ile Leu Ala Leu Gln Gln Ala Leu Lys Glu Gln						
	370		375		380	
Lys Leu Lys Ala Glu Ser Leu Ser Asp Lys Leu Asn Asp Leu Glu Lys						
	385		390		395	
Lys His Ala Met Leu Glu Met Asn Ala Arg Ser Leu Gln Gln Lys Leu						
	405		410		415	
Glu Thr Glu Arg Glu Leu Lys Gln Arg Leu Leu Glu Glu Gln Ala Lys						
	420		425		430	
Leu Gln Gln Gln Met Asp Leu Gln Lys Asn His Ile Phe Arg Leu Thr						
	435		440		445	
Gln Gly Leu Gln Glu Ala Leu Asp Arg Ala Asp Leu Leu Lys Thr Glu						
	450		455		460	
Arg Ser Asp Leu Glu Tyr Gln Leu Glu Asn Ile Gln Val Leu Tyr Ser						
	465		470		475	
His Glu Lys Val Lys Met Glu Gly Thr Ile Ser Gln Gln Thr Lys Leu						
	485		490		495	
Ile Asp Phe Leu Gln Ala Lys Met Asp Gln Pro Ala Lys Lys Lys						
	500		505		510	
Val Pro Leu Gln Tyr Asn Glu Leu Lys Leu Ala Leu Glu Lys Glu Lys						
	515		520		525	
Ala Arg Cys Ala Glu Leu Glu Glu Ala Leu Gln Lys Thr Arg Ile Glu						
	530		535		540	
Leu Arg Ser Ala Arg Glu Glu Ala Ala His Arg Lys Ala Thr Asp His						
	545		550		555	
Pro His Pro Ser Thr Pro Ala Thr Ala Arg Gln Gln Ile Ala Met Ser						
	565		570		575	
Ala Ile Val Arg Ser Pro Glu His Gln Pro Ser Ala Met Ser Leu Leu						

[illegible]

1010 1015 1020
 Asp Lys Asn Asp His Ser Leu Ala Pro Ala Val Phe Ala Ala Ser Ser
 1025 1030 1035 1040
 Asn Ser Phe Pro Val Ser Ile Val Gln Val Asn Ser Ala Gly Gln Arg
 1045 1050 1055
 Glu Glu Tyr Leu Leu Cys Phe His Glu Phe Gly Val Phe Val Asp Ser
 1060 1065 1070
 Tyr Gly Arg Arg Ser Arg Thr Asp Asp Leu Lys Trp Ser Arg Leu Pro
 1075 1080 1085
 Leu Ala Phe Ala Tyr Arg Glu Pro Tyr Leu Phe Val Thr His Phe Asn
 1090 1095 1100
 Ser Leu Glu Val Ile Glu Ile Gln Ala Arg Ser Ser Ala Gly Thr Pro
 1105 1110 1115 1120
 Ala Arg Ala Tyr Leu Asp Ile Pro Asn Pro Arg Tyr Leu Gly Pro Ala
 1125 1130 1135
 Ile Ser Ser Gly Ala Ile Tyr Leu Ala Ser Ser Tyr Gln Asp Lys Leu
 1140 1145 1150
 Arg Val Ile Cys Cys Lys Gly Asn Leu Val Lys Glu Ser Gly Thr Glu
 1155 1160 1165
 His His Arg Gly Pro Ser Thr Ser Arg Ser Ser Pro Asn Lys Arg Gly
 1170 1175 1180
 Pro Pro Thr Tyr Asn Glu His Ile Thr Lys Arg Val Ala Ser Ser Pro
 1185 1190 1195 1200
 Ala Pro Pro Glu Gly Pro Ser His Pro Arg Glu Pro Ser Thr Pro His
 1205 1210 1215
 Arg Tyr Arg Glu Gly Arg Thr Glu Leu Arg Arg Asp Lys Ser Pro Gly
 1220 1225 1230
 Arg Pro Leu Glu Arg Glu Lys Ser Pro Gly Arg Met Leu Ser Thr Arg
 1235 1240 1245
 Arg Glu Arg Ser Pro Gly Arg Leu Phe Glu Asp Ser Ser Arg Gly Arg
 1250 1255 1260
 Leu Pro Ala Gly Ala Val Arg Thr Pro Leu Ser Gln Val Asn Lys Val
 1265 1270 1275 1280
 Trp Asp Gln Ser Ser Val
 1285

<210> 6247

<211> 497

<212> DNA

<213> Homo sapiens

<400> 6247

gcggccgcag cgctgaatgg ggtggaccga cgttcctgc agcggttcaca aggctggctc

60

tagaagtgct ggagagggcc aagaggagg cggtggactg gcatgccctg gacgtccca

120

aaggctgcat gggggctcctt gcccgggagg cgcacacat agagaaacag ccggcagccg

180

gccgcagcg cgttcctccg ggagagaaat attattcatc tgtgccagag gaaggagggg

240

caacccatgt ctatcggttat cacagaggcg agtcgaagct gcacatgtgc ttggacatag

300

ggaatggtca gagaaaagac agaaaaaaga catcccttgg tcttgagggc agctatcaaa

360

tatcagagca tgctccagag gcatcccagc ctgtgagtag ggaactgctt acgcactggg
 420
 tttcaccacc gttgcaactc catgaaccag ttgacatggt tcttagaggg ctatttgaat
 480
 tgagtctata gtatttt
 497

<210> 6248
 <211> 142
 <212> PRT
 <213> Homo sapiens

<400> 6248
 Met Gly Trp Thr Asp Val Pro Cys Ser Val His Lys Ala Gly Ser Arg
 1 5 10 15
 Ser Ala Gly Glu Gly Gln Glu Glu Gly Gly Leu Ala Cys Pro Gly
 20 25 30
 Ala Ser Gln Arg Leu His Gly Gly Pro Cys Pro Gly Gly Ala Pro Pro
 35 40 45
 Arg Glu Thr Ala Gly Ser Arg Pro Ala Ala Arg Ser Pro Gly Arg Glu
 50 55 60
 Ile Leu Phe Ile Cys Ala Arg Gly Arg Arg Gly Asn Pro Cys Leu Ser
 65 70 75 80
 Leu Ser Gln Arg Arg Val Glu Ala Ala His Val Leu Gly His Arg Glu
 85 90 95
 Trp Ser Glu Lys Arg Gln Lys Lys Asp Ile Pro Trp Ser Trp Arg Gln
 100 105 110
 Leu Ser Asn Ile Arg Ala Cys Ser Arg Gly Ile Pro Ala Cys Glu Tyr
 115 120 125
 Gly Thr Ala Tyr Ala Leu Gly Phe Thr Thr Val Ala Thr Pro
 130 135 140

<210> 6249
 <211> 1217
 <212> DNA
 <213> Homo sapiens

<400> 6249
 nntgagcaac aaaccgaggt ctggagaacg ccatcagctc gctgcttaaa ctggaaacaa
 60
 aagtctcaac ttccaacctc ttgcagcta ggagtggcca agtagcatag atctggtgaa
 120
 tgaactgcag gtgggaattt ctgagaaggt ttccttctta aatagaaaga ttaaaccaca
 180
 ggttcatta tgggtcgact tgatgggaaa gtcacatcc tgacggccgc tgctcagggg
 240
 attggccaag cagctgcctt agcttttgca agagaagggtg ccaaagtcac agccacagac
 300
 ataatgagt ccaaacttca ggaactggaa aagtaccgg gtattcaaac tctgtcctt
 360
 gatgtcacia agaagaaca aattgatcag ttgccaatg aagttgagag acttgatgtt
 420
 ctctttaatg ttgctggttt tgtccatcat ggaactgtcc tggattgtga ggagaaagac
 480

tgggacttct cgatgaatct caatgtgcgc agcatgtacc tgatgatcaa ggcattcctt
 540
 cctaaaatgc ttgtcagaa atctggcaat attatcaaca tgtcttctgt ggcttccagc
 600
 gtcaaaggag ttgtgaacag atgtgtgtac agcacaacca aggcagccgt gattggcctc
 660
 acaaaatctg tggctgcaga tttcatccag cagggcatca ggtgcaactg tgtgtgcca
 720
 ggaacagttg atacgccatc tctacaagaa agaatacaag ccagaggaaa tcctgaagag
 780
 gcacggaatg atttcctgaa gagacaaaag acgggaagat tcgcaactgc agaagaaata
 840
 gccatgctct gcgtgtatct ggcttctgat gaatctgctt atgtaactgg taacctgtc
 900
 atcattgatg gaggctggag cttgtgattt taggatctcc atggtgggaa ggaaggcagg
 960
 cccttcctat ccacagttaa cctgggtacg aagaaaactc accaatcatc tccttctgt
 1020
 taatcacatg ttaatgaaaa taagctcttt ttaatgatgt cactgtttgc aagagtctga
 1080
 ttctttaagt atattaatct ctttgtaatc tcttctgaaa tcattgtaaa gaaataaaaa
 1140
 tattgaactc atagcaggag aatagttttt aaaataaatc tcgatttggt agcaaaaaaa
 1200
 aaaaaaaaaa aaaaaaa
 1217

<210> 6250

<211> 245

<212> PRT

<213> Homo sapiens

<400> 6250

Met Gly Arg Leu Asp Gly Lys Val Ile Ile Leu Thr Ala Ala Ala Gln
 1 5 10 15
 Gly Ile Gly Gln Ala Ala Ala Leu Ala Phe Ala Arg Glu Gly Ala Lys
 20 25 30
 Val Ile Ala Thr Asp Ile Asn Glu Ser Lys Leu Gln Glu Leu Glu Lys
 35 40 45
 Tyr Pro Gly Ile Gln Thr Arg Val Leu Asp Val Thr Lys Lys Lys Gln
 50 55 60
 Ile Asp Gln Phe Ala Asn Glu Val Glu Arg Leu Asp Val Leu Phe Asn
 65 70 75 80
 Val Ala Gly Phe Val His His Gly Thr Val Leu Asp Cys Glu Glu Lys
 85 90 95
 Asp Trp Asp Phe Ser Met Asn Leu Asn Val Arg Ser Met Tyr Leu Met
 100 105 110
 Ile Lys Ala Phe Leu Pro Lys Met Leu Ala Gln Lys Ser Gly Asn Ile
 115 120 125
 Ile Asn Met Ser Ser Val Ala Ser Ser Val Lys Gly Val Val Asn Arg
 130 135 140
 Cys Val Tyr Ser Thr Thr Lys Ala Ala Val Ile Gly Leu Thr Lys Ser
 145 150 155 160
 Val Ala Ala Asp Phe Ile Gln Gln Gly Ile Arg Cys Asn Cys Val Cys

				165						170						175
Pro	Gly	Thr	Val	Asp	Thr	Pro	Ser	Leu	Gln	Glu	Arg	Ile	Gln	Ala	Arg	
			180					185					190			
Gly	Asn	Pro	Glu	Glu	Ala	Arg	Asn	Asp	Phe	Leu	Lys	Arg	Gln	Lys	Thr	
		195					200					205				
Gly	Arg	Phe	Ala	Thr	Ala	Glu	Glu	Ile	Ala	Met	Leu	Cys	Val	Tyr	Leu	
	210					215				220						
Ala	Ser	Asp	Glu	Ser	Ala	Tyr	Val	Thr	Gly	Asn	Pro	Val	Ile	Ile	Asp	
225					230				235					240		
Gly	Gly	Trp	Ser	Leu												
				245												

<210> 6251

<211> 1611

<212> DNA

<213> Homo sapiens

<400> 6251

```

tttttttttt tttttttttt tttttttttt tttttttttt tttccagat caggaagttt
60
tattgctgac atgcaggaag agtcccatg tagtacaaaa atatgtcttt atacaaactt
120
ttttgtgact ttttccgttt ctttacaata ggacttctct cagtgtgtga caccagtgga
180
gggtgacccc atcctcctct cctttgcttc accaggaatg tcatcagaca catggcctga
240
ccttgaaggg gccagtcctg tctgacaggg ctttgcagac ccggcggcta ttgctttgaa
300
aaggaggaga aagaccacgc acgggcagca gcctggaggg acccgggtggg ctgctgagag
360
ggggctccgc tgcgacgggc cctggcccag cttcaggccc tcacaggagg acagtcaagg
420
gctgggagcc ctaggccgga ctgcatttcc gctcccgcag gagactttct atgaaataaa
480
tatagaaaag agggcatccc ccagcccac agcacaagac cctggccctc agcgtggac
540
agctgagaca gacgcaggct cgctgctcag ggggagtaag tgctgggctc cagtaggctc
600
ccacaggccc actgaggcag aggcattgag cgcccaagtg ctggatgggg catggggaga
660
aaggggcgtg ggcagccctg ctactgctgg caagaggtgg cccattttt tccagatggg
720
gaaactgagg cacaaggagg tttgggaact tgcccaaggt cactcacagt ggtcagctt
780
tttaggggga ggagagcggc tcacactctg ggaaacacag tcacctcccc actggggagc
840
agggccaggc aggagggggc tcaggggcca tgactgctg gaggggacac tcagcctctc
900
tgaggacata tggggggtag gcctctgggg aagggtcttt gcttggcatc aggcagggcc
960
aagtccagta agggcaaggg gagggggcat tctggtgaga acagcatttc tggcaagacg
1020
ggcatccact tcaaaatctc ggctcaaaag ggcagcaggg ctgttctcaa gccaggcagg
1080

```


caggggtcccc caatccctac aattctcttg agtccctcac caccatggag gacccttgct
 1140
 aggggtctacc gggagagtca ccacatctat tatgaggcaa gggcactggg atatgttccc
 1200
 accatccct aaacacaaga gtaggctagg ggagcgtgca ggcagcccc gctcacggcc
 1260
 aggcctgcag cccaacccat gggccccttc gcactgggag tccacgtgag ctacgtacca
 1320
 cggggaagga tagagaaggg aacagggttaa cgcgctgta cagcacctca gagaagccac
 1380
 tgagacggga gagaagagc caggtctaga aaggcctccc atcaccggca gcagagaggg
 1440
 actggtgggc tgaaggggga cagggactgg caggaggggc ttccctgcct ggggggtgagg
 1500
 agggagctca cgtgtgggct gtggattcct tgctgtccag ccaggctggg ggcaggaggt
 1560
 ggccatggac tgagccacct agagatggga gagaagttgg tatgggtaan a
 1611

<210> 6252

<211> 100

<212> PRT

<213> Homo sapiens

<400> 6252

Met	Gly	Gly	Arg	Pro	Leu	Gly	Lys	Gly	Leu	Cys	Leu	Ala	Ser	Gly	Arg
1				5				10					15		
Ala	Lys	Ser	Ser	Lys	Gly	Lys	Gly	Arg	Gly	His	Ser	Gly	Glu	Asn	Ser
			20				25					30			
Ile	Ser	Gly	Lys	Thr	Gly	Ile	His	Phe	Lys	Ile	Ser	Ala	Gln	Lys	Gly
		35				40					45				
Ser	Arg	Ala	Val	Leu	Lys	Pro	Gly	Arg	Gln	Gly	Pro	Pro	Ile	Pro	Thr
	50				55				60						
Ile	Leu	Leu	Ser	Pro	Ser	Pro	Pro	Trp	Arg	Thr	Leu	Ala	Arg	Val	Tyr
65				70				75						80	
Arg	Glu	Ser	His	His	Ile	Tyr	Tyr	Glu	Ala	Arg	Ala	Leu	Gly	Tyr	Val
			85					90						95	
Pro	Thr	Ile	Pro												
			100												

<210> 6253

<211> 1953

<212> DNA

<213> Homo sapiens

<400> 6253

nngtggggta gggggcaagg cgggcgccga gtttgcaaag gctcgcagcg gccagaaacc
 60
 cggctccgag cggcgggcgc ccggcttccg ctgcccgta gctaaggacg gtccgctccc
 120
 tctagccagc tccgaatcct gatccaggcg ggggccaggg gccctcgcc tcccctctga
 180
 ggaccgaaga tgagcttccct cttcagcagc cgctcttcta aaacattcaa accaaagaag
 240

aatatccctg aaggatctca tcagtatgaa ctcttaaaac atgcagaagc aactctagga
300
agtgggaatc tgagacaagc tggtatgtg cctgagggag aggatctcaa tgaatggatt
360
gctgtgaaca ctgtggattt cttaaccag atcaacatgt tatatggaac tattacagaa
420
ttctgcactg aagcaagctg tccagtcattg tctgcaggtc cgagatatga atatcactgg
480
gcagatggta ctaatattaa aaagccaatc aaatgttctg caccaaaata cattgactat
540
ttgatgactt gggttcaaga tcagcttgat gatgaaactc tttttccttc taagattggg
600
gtcccatctc ccaaaaactt tatgtctgtg gcaaagacta ttctaaagcg tctgttcagg
660
gtttatgccc atatttatca ccagcacttt gattctgtga tgcagctgca agaggaggcc
720
cacctcaaca cctcctttaa gcactttatt ttctttgttc aggagttaa tctgattgat
780
aggcgtgagc tggcacctct tcaagaatta atagagaaac ttggatcaaa agacagataa
840
atgtttcttc tagaacacag ttacccctt gcttcattc ttgctagaac tatctcattg
900
ctactgtta tagactagt atacaaactt taagaaaaca ggataaaaag ataccattg
960
cctgtgtcta ctgataaaat tatcccaaag gtaggttggt gtgatagttt ccgagtaaga
1020
ccttaaggac acagccaaat cttaagtact gtgtgaccac tcttgttgtt atcacatagt
1080
catacttggg tgtaatatgt gatggttaac ctgtagctta taaatttact tattattctt
1140
ttactcattt actcagtcatt ttctttacaa gaaaatgatt gaatctgttt taggtgacag
1200
cacaatggac attaagaatt tccatcaata atttatgaat aagtttccag aacaaatttc
1260
ctaataacac aatcagattg gttttattct tttattttac gaataaaaaa tgtatttttc
1320
agtacccttg agatttagaa catctgtgtc acttcagata acattttagt ttcaagtttg
1380
tatggtagtg tttttataga taagatacgt ctattttttc aaaattcatg attgcagttt
1440
aaatcatcat atgacgtgtg ggtgggagca accaaagtta tttttacagg gacttttatt
1500
tttgatcttt atttgagatt gttttcatat ctatctaaat tattaggagt gtgtgtatca
1560
gaagtaattt tttaatgtct tctaaggatg gtcttccagg cttttaact gaaaagctta
1620
attcagatag tagcttttgg ctgagaaaag gaatccaaaa tattaataaa tttagatctc
1680
aaaaccacta tttttattat ttcattattt ttcagaggcc ttaaaattct gggttaagaga
1740
atggaggaaa atactcagag tacttgatta ttttatttcc tttatttaa aaattacttc
1800
tatgttttta ttgtctcttg agccttagtt aagagtagtg tagaaatgca tgaacttc
1860

cctaataagg ataaaactta aggaaaacca caataaacca tgaagggtga cacatcttaa
1920

aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa

1953

<210> 6254

<211> 216

<212> PRT

<213> Homo sapiens

<400> 6254

Met	Ser	Phe	Leu	Phe	Ser	Ser	Arg	Ser	Ser	Lys	Thr	Phe	Lys	Pro	Lys
1			5							10				15	
Lys	Asn	Ile	Pro	Glu	Gly	Ser	His	Gln	Tyr	Glu	Leu	Leu	Lys	His	Ala
			20					25					30		
Glu	Ala	Thr	Leu	Gly	Ser	Gly	Asn	Leu	Arg	Gln	Ala	Val	Met	Leu	Pro
		35					40					45			
Glu	Gly	Glu	Asp	Leu	Asn	Glu	Trp	Ile	Ala	Val	Asn	Thr	Val	Asp	Phe
	50					55					60				
Phe	Asn	Gln	Ile	Asn	Met	Leu	Tyr	Gly	Thr	Ile	Thr	Glu	Phe	Cys	Thr
65					70					75				80	
Glu	Ala	Ser	Cys	Pro	Val	Met	Ser	Ala	Gly	Pro	Arg	Tyr	Glu	Tyr	His
			85						90					95	
Trp	Ala	Asp	Gly	Thr	Asn	Ile	Lys	Lys	Pro	Ile	Lys	Cys	Ser	Ala	Pro
		100						105						110	
Lys	Tyr	Ile	Asp	Tyr	Leu	Met	Thr	Trp	Val	Gln	Asp	Gln	Leu	Asp	Asp
		115					120					125			
Glu	Thr	Leu	Phe	Pro	Ser	Lys	Ile	Gly	Val	Pro	Phe	Pro	Lys	Asn	Phe
	130					135					140				
Met	Ser	Val	Ala	Lys	Thr	Ile	Leu	Lys	Arg	Leu	Phe	Arg	Val	Tyr	Ala
145					150					155				160	
His	Ile	Tyr	His	Gln	His	Phe	Asp	Ser	Val	Met	Gln	Leu	Gln	Glu	Glu
			165						170					175	
Ala	His	Leu	Asn	Thr	Ser	Phe	Lys	His	Phe	Ile	Phe	Phe	Val	Gln	Glu
		180					185						190		
Phe	Asn	Leu	Ile	Asp	Arg	Arg	Glu	Leu	Ala	Pro	Leu	Gln	Glu	Leu	Ile
		195					200					205			
Glu	Lys	Leu	Gly	Ser	Lys	Asp	Arg								
	210					215									

<210> 6255

<211> 622

<212> DNA

<213> Homo sapiens

<400> 6255

nntccggagg ctgagacagg agaatcgctt gaaccacagga ggccgagggt gcagtgagcc
60
gagatcatgc cattgcactc cagcctgggc aacagagtga gacttcatct caaaaaaaaa
120
aaagccacag tggctgcctt cacagccagc gagggccacg cacatcccag ggtagtggag
180
ctaccaaga cggatgaggg cctaggcttc aacatcatgg gtggcaaaga gcaaaactcg
240

cccatctaca tctcccgggt catcccaggg ggtgtggtg accgccatgg aggcctcaag
 300
 cgtggggatc aactgttgtc ggtgaacggt gtgagcgttg agggtgagca gcatgagaag
 360
 gcggtggagc tgctgaaggc ggcccagggc tcggtgaagc tggttgtccg ttacacaccg
 420
 cgagtgtctg aggagatgga ggcccgggtc gagaagatgc gctctgcccg ccggcgccaa
 480
 cagcatcaga gctactcgtc cttggagtct cgagggtgaa accacagatc tggacgttca
 540
 cgtgcactct ctctctgtac agtatttatt gttcctggca ctttatttaa agatttttga
 600
 ccctcaaaaa aaaaaaaaaa aa
 622

<210> 6256

<211> 150

<212> PRT

<213> Homo sapiens

<400> 6256

Met	Pro	Leu	His	Ser	Ser	Leu	Gly	Asn	Arg	Val	Arg	Leu	His	Leu	Lys
1			5					10					15		
Lys	Lys	Lys	Ala	Thr	Val	Ala	Ala	Phe	Thr	Ala	Ser	Glu	Gly	His	Ala
			20					25					30		
His	Pro	Arg	Val	Val	Glu	Leu	Pro	Lys	Thr	Asp	Glu	Gly	Leu	Gly	Phe
		35					40					45			
Asn	Ile	Met	Gly	Gly	Lys	Glu	Gln	Asn	Ser	Pro	Ile	Tyr	Ile	Ser	Arg
50					55					60					
Val	Ile	Pro	Gly	Gly	Val	Ala	Asp	Arg	His	Gly	Gly	Leu	Lys	Arg	Gly
65					70				75					80	
Asp	Gln	Leu	Leu	Ser	Val	Asn	Gly	Val	Ser	Val	Glu	Gly	Glu	Gln	His
			85					90						95	
Glu	Lys	Ala	Val	Glu	Leu	Leu	Lys	Ala	Ala	Gln	Gly	Ser	Val	Lys	Leu
			100					105						110	
Val	Val	Arg	Tyr	Thr	Pro	Arg	Val	Leu	Glu	Glu	Met	Glu	Ala	Arg	Phe
			115				120					125			
Glu	Lys	Met	Arg	Ser	Ala	Arg	Arg	Gln	Gln	His	Gln	Ser	Tyr	Ser	
		130				135					140				
Ser	Leu	Glu	Ser	Arg	Gly										
145					150										

<210> 6257

<211> 2216

<212> DNA

<213> Homo sapiens

<400> 6257

ntnttttttt tttttttttt ttttttgcgc agcaatcttt attcagttct tcttgggggt
 60
 gggatgcctc ccttcccatg ctcccacccc tcccatccca gaactccgtt gggctcagtg
 120
 tctctgttg agggaaggtc ttggtgccca gatgcctact ctgcaggaga gggaggaacc
 180

ttgtcccttt gcgggagtcg ctggtctctt ctgttggtgg gaagaaggaa ggtgggaggg
240
gcactgtcca ccagcactca gagctccatt atgtccccag ctgggggtgc agggtagggg
300
ggactggggg tgtccccag cctcagcaga cggagggcct cagggatgag gctgccagga
360
tagcgccaga gaagcagctc agagcaaggg ctcttgagtg ggggcagggc tggggagaag
420
gtcatggggg ggctgcagta ggggtggtca ttgtgcaggc tgagttgaga gaagtgggtg
480
gccatgttct cctcagacag aaactgcttg cgcagaggct cctgctctc ctccagcgcg
540
cgcttggtgc tcatgggcac agctcctcgg agaggggagc tggcgctccag gcccgaagt
600
acccccaaag cggcccgcgg gaggcgctgg gcccctccct gggggcctcg ctgcaagggc
660
tgctgcagga tcattgggtt ttggggctct gcgggtggga tctgggagac aggggagggg
720
tctctgaggg cgtggccaag agaggatggg cgtggcttta ggcgggcaca gccgcgaggt
780
tctgcgcggg cgcggaagac gggcggcgcg tggcggaagg caggcttgct cctcggggcg
840
ggggagggtg tccggcttaa gggggctgcg gtggacacca cttcttaatg tcgggggtct
900
tcgcggcgct cacctcggtc cctagggctt gggacggtac gcaccagcca cttcgcgc
960
gaaggcggtg gggcgccacg gagaggaacc gctctaggca cgtaaggcct cgtgaggttg
1020
cgtcgcgcgc ggagcactct gggacttgta gttctggaga tggagcgagc tgtgccgctc
1080
gcggtgcctc tgggtcagac agagggttct caggccttgc agcggctcca tatgaccatc
1140
ttctccaga gcgtctcacc atgtgggaag tttctggcgg ctggcaacaa ttacgggcag
1200
attgccatct tcagcttgct ctctgctttg agctcagaag ccaaagagga aagtaagaag
1260
ccggtggtga ctttccaagc ccatgatggg cccgtctata gcatggtttc caccgatcga
1320
catctgctta gtgctgggga tggggaggtg aaggcctggc tttgggcgga gatgctcaag
1380
aagggtgta aggagctgtg gcgtcgtcag cctccatata ggaccagcct ggaagtgcct
1440
gagatcaacg ctttctgctt ggtccccaag gagaattccc tcatcctggc tgggggagac
1500
tgtcagttgc acactatgga ccttgaaact gggactttca cgagggtcct ccggggccac
1560
acagactaca tccactgcct ggcactgcgg gaaaggagcc cagaggtgct gtcaggtggc
1620
gaggatggag ctgttcgact ttgggacctg cgcacagcca aggaggtcca gacgatcgag
1680
tctataagca cgaggagtgc tcgaggcccc acaatgggcg ctggattgga tgtttggact
1740
gattccgact ggatgggtctg tggagggggc ccagccctca cctctggca cctccgatcc
1800

tccacaccca ccaccatctt ccccatccgg gcgccacaga agcacgtcac cttctaccag
 1860
 gacctgattc tgtcagctgg ccagggccgc tgcgtcaacc agtggcagct gagcggggag
 1920
 ctgaaggccc aggtgcctgg ctccctccca gggctgctca gcctcagcct caaccagcag
 1980
 cctgccgcgc ctgagtgaac ggtcctgaca gctgcaggca acagctgccg ggtggatgtc
 2040
 ttcaccaacc tgggttaccg agccttctcc ctgtccttct gatctctgac gacaccccca
 2100
 gccagctcag ggttttagag tgtttttcat tttctttttt tttttttttt tacaataaag
 2160
 ttccaggctt ttttaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
 2216

<210> 6258

<211> 340

<212> PRT

<213> Homo sapiens

<400> 6258

Met	Glu	Arg	Ala	Val	Pro	Leu	Ala	Val	Pro	Leu	Gly	Gln	Thr	Glu	Val
1			5						10					15	
Phe	Gln	Ala	Leu	Gln	Arg	Leu	His	Met	Thr	Ile	Phe	Ser	Gln	Ser	Val
		20					25						30		
Ser	Pro	Cys	Gly	Lys	Phe	Leu	Ala	Ala	Gly	Asn	Asn	Tyr	Gly	Gln	Ile
		35					40					45			
Ala	Ile	Phe	Ser	Leu	Ser	Ser	Ala	Leu	Ser	Ser	Glu	Ala	Lys	Glu	Glu
	50					55					60				
Ser	Lys	Lys	Pro	Val	Val	Thr	Phe	Gln	Ala	His	Asp	Gly	Pro	Val	Tyr
65					70					75					80
Ser	Met	Val	Ser	Thr	Asp	Arg	His	Leu	Leu	Ser	Ala	Gly	Asp	Gly	Glu
			85						90					95	
Val	Lys	Ala	Trp	Leu	Trp	Ala	Glu	Met	Leu	Lys	Lys	Gly	Cys	Lys	Glu
		100					105						110		
Leu	Trp	Arg	Arg	Gln	Pro	Pro	Tyr	Arg	Thr	Ser	Leu	Glu	Val	Pro	Glu
		115					120					125			
Ile	Asn	Ala	Leu	Leu	Leu	Val	Pro	Lys	Glu	Asn	Ser	Leu	Ile	Leu	Ala
	130					135					140				
Gly	Gly	Asp	Cys	Gln	Leu	His	Thr	Met	Asp	Leu	Glu	Thr	Gly	Thr	Phe
145				150						155					160
Thr	Arg	Val	Leu	Arg	Gly	His	Thr	Asp	Tyr	Ile	His	Cys	Leu	Ala	Leu
			165						170					175	
Arg	Glu	Arg	Ser	Pro	Glu	Val	Leu	Ser	Gly	Gly	Glu	Asp	Gly	Ala	Val
		180						185					190		
Arg	Leu	Trp	Asp	Leu	Arg	Thr	Ala	Lys	Glu	Val	Gln	Thr	Ile	Glu	Ser
	195						200					205			
Ile	Ser	Thr	Arg	Ser	Ala	Arg	Gly	Pro	Thr	Met	Gly	Ala	Gly	Leu	Asp
	210					215					220				
Val	Trp	Thr	Asp	Ser	Asp	Trp	Met	Val	Cys	Gly	Gly	Gly	Pro	Ala	Leu
225					230					235					240
Thr	Leu	Trp	His	Leu	Arg	Ser	Ser	Thr	Pro	Thr	Thr	Ile	Phe	Pro	Ile
			245						250					255	
Arg	Ala	Pro	Gln	Lys	His	Val	Thr	Phe	Tyr	Gln	Asp	Leu	Ile	Leu	Ser

	260		265		270										
Ala	Gly	Gln	Gly	Arg	Cys	Val	Asn	Gln	Trp	Gln	Leu	Ser	Gly	Glu	Leu
	275		280		285										
Lys	Ala	Gln	Val	Pro	Gly	Ser	Ser	Pro	Gly	Leu	Leu	Ser	Leu	Ser	Leu
	290		295		300										
Asn	Gln	Gln	Pro	Ala	Ala	Pro	Glu	Cys	Lys	Val	Leu	Thr	Ala	Ala	Gly
305			310		315										320
Asn	Ser	Cys	Arg	Val	Asp	Val	Phe	Thr	Asn	Leu	Gly	Tyr	Arg	Ala	Phe
			325		330									335	
Ser	Leu	Ser	Phe												
	340														

<210> 6259

<211> 384

<212> DNA

<213> Homo sapiens

<400> 6259

```

ccatgcagcg atcccataga acacagctca gagtctgata acagtgtcct tgaaattcca
60
gatgctttcg atagaacaga gaacatgtta tctatgcaga aaaatgaaaa gataaagtat
120
tctagggttg ctgccacaaa cactagggtta aaagcaaaac agaagcctct cattagtaac
180
tcacatacag accacttaat ggggtgtact aagagtgcag agcctggaac cgagacgtct
240
cagggttaatt ccttctctga tctgaaggca tctactcttg ttcacaaacc ccagtcagat
300
tttacaaatg atgctctctc tccaaaattc aacctgtcat caagcatatc cagtgagaac
360
tcgttaataa aggggtggggc agca
384

```

<210> 6260

<211> 128

<212> PRT

<213> Homo sapiens

<400> 6260

Pro	Cys	Ser	Asp	Pro	Ile	Glu	His	Ser	Ser	Glu	Ser	Asp	Asn	Ser	Val
1				5					10				15		
Leu	Glu	Ile	Pro	Asp	Ala	Phe	Asp	Arg	Thr	Glu	Asn	Met	Leu	Ser	Met
			20				25					30			
Gln	Lys	Asn	Glu	Lys	Ile	Lys	Tyr	Ser	Arg	Phe	Ala	Ala	Thr	Asn	Thr
	35				40						45				
Arg	Val	Lys	Ala	Lys	Gln	Lys	Pro	Leu	Ile	Ser	Asn	Ser	His	Thr	Asp
	50				55					60					
His	Leu	Met	Gly	Cys	Thr	Lys	Ser	Ala	Glu	Pro	Gly	Thr	Glu	Thr	Ser
65					70				75					80	
Gln	Val	Asn	Ser	Phe	Ser	Asp	Leu	Lys	Ala	Ser	Thr	Leu	Val	His	Lys
			85					90					95		
Pro	Gln	Ser	Asp	Phe	Thr	Asn	Asp	Ala	Leu	Ser	Pro	Lys	Phe	Asn	Leu
			100					105					110		
Ser	Ser	Ser	Ile	Ser	Ser	Glu	Asn	Ser	Leu	Ile	Lys	Gly	Gly	Ala	Ala

115

120

125

<210> 6261
<211> 3619
<212> DNA
<213> Homo sapiens

<400> 6261
ntccttgacag gctctgcgtc gggaaagccg ctcatctctg cttccccctc cctttcccgg
60
ctcaagtcct tcctctctct ttcctttctt tccgcctatc ttttttctgc tgccgctccg
120
ggtccggggc attttccggg ccggggcgac taagggtgcgc ggccccgggg ccaggtatat
180
gacccgccgt cctgctatcc ttcgcttccc ccgccccatg tggtgcggg gccgcggcgg
240
cgctgcccac tatggcccg aaagtagtta gcaggaagcg gaaagcgccc gcctcgccgg
300
gagctgggag cgacgctcat gggcccgag tttggctggg atcactcgct tcacaaaagg
360
aaaagacttc ctctgtgaa gagatcctta gtatactact tgaagaaccg ggaagtcagg
420
ctacagaatg aaaccagcta ctctcgagtg ttgcatggtt atgcagcaca gcaacttccc
480
agtctctga aggagagaga gtttcacctt gggaccctta ataaagtgtt tgcctctcag
540
tggttgaatc ataggcaagt ggtgtgtggc acaaaatgca acacgctatt tgcgtagat
600
gtccagacaa gccagatcac caagatcccc attctgaaag accgggagcc tggaggtgtg
660
accagcagg gctgtggtat ccatgccatc gagctgaatc cttctagaac actgctagcc
720
actggaggag acaaccccaa cagtcttgcc atctatcgac tacctacgct ggatcctgtg
780
tgtgtaggag atgatggaca caaggactgg atcttttcca tcgcatggat cagcgacact
840
atggcagtg ctggctcacg tgatggttct atgggactct gggaggtgac agatgatgtt
900
ttgacccaaa gtgatgcgag acacaatgtg tcacgggtcc ctgtgtatgc acacatcact
960
cacaaggcct taaaggacat ccccaaagaa gacacaaacc ctgacaactg caaggttcgg
1020
gctctggcct tcaacaacaa gaacaaggaa ctgggagcag tgtctctgga tggctacttt
1080
catctctgga aggtgaaaa tacactatct aagctcctct ccaccaaact gccatattgc
1140
cgtgagaatg tgtgtctggc ttatggtagt gaatggtcag tttatgcagt gggctcccaa
1200
gctcatgtct ccttcttgga tccacggcag ccatcataca acgtcaagtc tgtctgttcc
1260
aggagcggag gcagtggaat ccggtcagtg agtttctacg agcacatcat cactgtggga
1320
acagggcagg gctccctgct gttctatgac atccgagctc agagatttct ggaagagagg
1380

ctctcagctt gttatgggtc caagcccaga ctagcagggg agaatctgaa actaaccact
1440
ggcaaaaggct ggctgaatca tgatgaaacc tggaggaatt acttttcaga cattgacttc
1500
ttcccgaatg ctgtttacac ccaactgctac gactcgtctg gaacgaaact ctttgtggca
1560
ggaggtcccc tcccttcagg gctccatgga aactatgctg ggctctggag ttaatgacaa
1620
ctccccaat gcagagattt acactaactt ccattctcag tttccttggt tcttttgatt
1680
tttttttcc taattgtgtg aggctcttgt gttttagtgg gaacaccaa gtttgcctat
1740
agtttaggca cttaatagga agaagctctg tacagaaatc tgaaagttgt tttgctttt
1800
gttttccct ttggtaatca aaattttact atcttttatt atttctggct tttcaacaa
1860
acattgttgc taatccctat ttttctttaa gtgacacaca ttctcctgtc tctggcttct
1920
tcaggctgaa atgacatagt ctttctcacc cttacttcac tottgagagg tagggctcct
1980
ttataattac atggttgctc tcagactttc tgtgaaagt tgggagctgt gtgtgtctgt
2040
gtgtgtgtga gagagagatc ttgtctgctg gtgtgtgtgt gatcttgtgt gcctgtagg
2100
actgtgtgtc actgaaatta cctggagtga ggattacttg taattaaaat atttataaaa
2160
gaaacaactt tattcacaga gtccagcttt gggactagtc tgtatcttgt tttttaagtc
2220
taacaacact gataatagga agtaaaaaca gaaaggaaaa gaaattacca ctgggaaaa
2280
ctttttagtt agattgtagg ctccctgggg cctcccatgc caggactgca aagtgatcca
2340
gccctacctg tcttcccacc tgtgtgtccc ccgtgtggga agttggtgtc acttcccctt
2400
cccaccctca catctgctta gccagtagcc acaccctaa aacatcagac tcaccatcca
2460
ggtgcagctc cagaggctac aaaaggcttc atgggacttg aatcccatc ctagcttctc
2520
tctccttccc ctcaagacct gatctggttt taaggggcct ggagctggga gtctcaagtc
2580
tgctaagatt cacatccata gcccctatgg ctttgaggag aatcctctct gccattcttc
2640
caatctcccc agtgggtttt gctattattt tctaaattgg gttaagtcta agaaggtggg
2700
ggtgagcagg gggtttatct gtgtgtagtg agtgcttcac gtgtggaata ttcattttct
2760
tactgcagtg ggacttgggg ttgaagccac cctcctact ctgttggtt agccctgaga
2820
tggtgacagg ctggcctgca gtcagcatca ttgtgcatgt gacagcatca atgtgattag
2880
taatttgtct gtctcctcct tgaactgtct gtttagctg aggtttttta acttgaggc
2940
agctgactgt gatgtccact tgttccctga tttttacaca tcatgtcaaa gataacagct
3000

gttccacccc accagttcct ctaagcacat actctgcttt tctgtcaaca tcccattttg
 3060
 gggaaaggaa aagtcataatt tattcttgca cccagttttt ttaacttggt ctcccagttg
 3120
 tccccctctt ctctgggtgt aagaaggga attggaaaaa aaattatata tatattctcc
 3180
 ttttaatggt ggggggctac tggagaggag agacagcaag tccaccctaa ctgtttacac
 3240
 agcacatacc acaggttctg gaattctcat cttcgaaacct agagaaatag gtgctataaa
 3300
 cagggaatta agcaaaatgc tggatgctat agatctttta attgtcttaa ttttttttct
 3360
 attattaaac tacaggtctg agatttctta gttctcacag aacttctatc attttaaact
 3420
 gacttgata tttaaaaaaa aaatcttcag taggatgttt tgtactattg ctagaccctc
 3480
 ttctgtaatg ggtaatgcgt ttgattgttt gagattttct gtttttaaaa atgtagcact
 3540
 tgactttttg ccaaggaaaa aaataaaaat tattccagtg caaaaaaaaa aaaaaaaaaa
 3600
 aaaaaaaaaa aaaaaaaaaa
 3619

<210> 6262

<211> 431

<212> PRT

<213> Homo sapiens

<400> 6262

Met	Gly	Pro	Gln	Phe	Gly	Trp	Asp	His	Ser	Leu	His	Lys	Arg	Lys	Arg
1				5					10					15	
Leu	Pro	Pro	Val	Lys	Arg	Ser	Leu	Val	Tyr	Tyr	Leu	Lys	Asn	Arg	Glu
			20					25					30		
Val	Arg	Leu	Gln	Asn	Glu	Thr	Ser	Tyr	Ser	Arg	Val	Leu	His	Gly	Tyr
			35				40					45			
Ala	Ala	Gln	Gln	Leu	Pro	Ser	Leu	Leu	Lys	Glu	Arg	Glu	Phe	His	Leu
	50					55				60					
Gly	Thr	Leu	Asn	Lys	Val	Phe	Ala	Ser	Gln	Trp	Leu	Asn	His	Arg	Gln
65					70					75				80	
Val	Val	Cys	Gly	Thr	Lys	Cys	Asn	Thr	Leu	Phe	Val	Val	Asp	Val	Gln
				85					90					95	
Thr	Ser	Gln	Ile	Thr	Lys	Ile	Pro	Ile	Leu	Lys	Asp	Arg	Glu	Pro	Gly
			100					105					110		
Gly	Val	Thr	Gln	Gln	Gly	Cys	Gly	Ile	His	Ala	Ile	Glu	Leu	Asn	Pro
			115				120					125			
Ser	Arg	Thr	Leu	Leu	Ala	Thr	Gly	Gly	Asp	Asn	Pro	Asn	Ser	Leu	Ala
			130				135					140			
Ile	Tyr	Arg	Leu	Pro	Thr	Leu	Asp	Pro	Val	Cys	Val	Gly	Asp	Asp	Gly
145				150						155				160	
His	Lys	Asp	Trp	Ile	Phe	Ser	Ile	Ala	Trp	Ile	Ser	Asp	Thr	Met	Ala
			165					170						175	
Val	Ser	Gly	Ser	Arg	Asp	Gly	Ser	Met	Gly	Leu	Trp	Glu	Val	Thr	Asp
			180					185					190		
Asp	Val	Leu	Thr	Lys	Ser	Asp	Ala	Arg	His	Asn	Val	Ser	Arg	Val	Pro

```
<210> 6263
<211> 2508
<212> DNA
<213> Homo sapiens
```

5448

ccagcttcag ctcctacttc ctcttcttct tcagcgtttc gacctgtaat gccatccagg
600
cagattgtag aaaggcaacc tcggatgctg gacttcaggg ttgaatacag agacagaaat
660
gttgatgtgg tacttgaaga cacctgtact gttggagaga ttaaacagat tctagaaaat
720
gaacttcaga tacctgtgtc caaaatgctg ttaaaaggct ggaagacggg agatgtggaa
780
gacagtacgg tcctaaaatc tctacacttg ccaaaaaaca acagtcttta tgccttaca
840
ccagatttgc caccaccttc atcatctagt catgctggg ccctgcagga gtcattaaat
900
caaaacttca tgtgatcat caccaccga gaagtcacg gggagtacaa cctgaacttc
960
tcaggaagca gtactattca agaggtaaag agaaatgtgt atgaccttac aagtatcccc
1020
gttcgccacc aattatggga gggctggcca acttctgcta cagacgactc aatgtgtctt
1080
gtggaatcag ggctctctta tccctgccat cgacttacag tgggaagaag atcttcacct
1140
gcacagaccc gggaaacagtc ggaagaacaa atcaccgatg ttcatatggt tagtgatagc
1200
gatggagatg actttgaaga tgctacagaa tttgggggtg atgatggaga agtatttggc
1260
atggcgatcat ctgccttgag aaaatctcca atgatttgtt ttttagtgcc agaaaacgca
1320
gaaaatgaag gagatgcctt attacaattt acagcagagt tttcttcaag atatggtgat
1380
tgccatctg tattttttat tggctcatta gaagctgctt ttcaagaggc cttctatgtg
1440
aaagcccgag atagaaagct tcttgetatc tacctccacc atgatgaaag tgtgttaacc
1500
aacgtgttct gctcacaat gctttgtgct gaatccattg tttcttatct gagtcaaaat
1560
tttataacct gggcttgga tctgacaaag gactccaaca gagcaagatt tctcactatg
1620
tgcaatagac actttggcag tgttgtggca caaacattc ggactcaaaa aacggatcag
1680
tttcgcttt tcctgattat tatgggaaag cgatcatcta atgaagtgtt gaatgtgata
1740
caaggggaaca caacagtaga tgagttaatg atgagactca tggctgcaat ggagatcttc
1800
acagcccaac aacaggaaga tataaaggac gaggatgaac gtgaagccag agaaaatgtg
1860
aagagagagc aagatgaggc ctatcgctt tcacttgagg ctgacagagc aaagagggaa
1920
gtcaccgaga gagagatggc agaacagttt cgtttggagc agattcgcaa agaacaagaa
1980
gaggaacgtg aggccatccg gctgtcctta gagcaagccc tgctcctga gccaaaggaa
2040
gaaaatgctg agcctgtgag caaactgagg atccggaccc ccagtggcga gttcttggag
2100
cggcgtttcc tggccagcaa caagctccag attgtctttg atttttagc ttccaaagga
2160

tttccatggg atgagtacaa gttactgagc acctttccta ggagagacgt aactcaactg
 2220
 gacccaaata aatcattatt ggaggtaaag ttgttccttc aagaaacctt tttccttgaa
 2280
 gcaaaagagt aaacacggcc cagcgggtgga accagccatt ccttgacaag ccagcagcct
 2340
 gcgtcaggag aagggtcctt cgccaaccca cccacacgct cgtctcactc aattcaatgt
 2400
 cacacttctg cctcttgcaa aattgctgga aaaagtaata ataaatatag ctacttaaga
 2460
 tttcccaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 2508

<210> 6264

<211> 654

<212> PRT

<213> Homo sapiens

<400> 6264

Met	Ala	Ser	Asn	Met	Asp	Arg	Glu	Met	Ile	Leu	Ala	Asp	Phe	Gln	Ala
1			5					10					15		
Cys	Thr	Gly	Ile	Glu	Asn	Ile	Asp	Glu	Ala	Ile	Thr	Leu	Leu	Glu	Gln
		20					25					30			
Asn	Asn	Trp	Asp	Leu	Val	Ala	Ala	Ile	Asn	Gly	Val	Ile	Pro	Gln	Glu
		35				40					45				
Asn	Gly	Ile	Leu	Gln	Ser	Glu	Tyr	Gly	Gly	Glu	Thr	Ile	Pro	Gly	Pro
	50				55					60					
Ala	Phe	Asn	Pro	Ala	Ser	His	Pro	Ala	Ser	Ala	Pro	Thr	Ser	Ser	Ser
65				70					75					80	
Ser	Ser	Ala	Phe	Arg	Pro	Val	Met	Pro	Ser	Arg	Gln	Ile	Val	Glu	Arg
			85					90					95		
Gln	Pro	Arg	Met	Leu	Asp	Phe	Arg	Val	Glu	Tyr	Arg	Asp	Arg	Asn	Val
		100					105					110			
Asp	Val	Val	Leu	Glu	Asp	Thr	Cys	Thr	Val	Gly	Glu	Ile	Lys	Gln	Ile
		115				120					125				
Leu	Glu	Asn	Glu	Leu	Gln	Ile	Pro	Val	Ser	Lys	Met	Leu	Leu	Lys	Gly
	130				135					140					
Trp	Lys	Thr	Gly	Asp	Val	Glu	Asp	Ser	Thr	Val	Leu	Lys	Ser	Leu	His
145				150					155					160	
Leu	Pro	Lys	Asn	Asn	Ser	Leu	Tyr	Val	Leu	Thr	Pro	Asp	Leu	Pro	Pro
			165					170					175		
Pro	Ser	Ser	Ser	Ser	His	Ala	Gly	Ala	Leu	Gln	Glu	Ser	Leu	Asn	Gln
		180				185						190			
Asn	Phe	Met	Leu	Ile	Ile	Thr	His	Arg	Glu	Val	Gln	Arg	Glu	Tyr	Asn
	195					200					205				
Leu	Asn	Phe	Ser	Gly	Ser	Ser	Thr	Ile	Gln	Glu	Val	Lys	Arg	Asn	Val
	210				215					220					
Tyr	Asp	Leu	Thr	Ser	Ile	Pro	Val	Arg	His	Gln	Leu	Trp	Glu	Gly	Trp
225				230					235					240	
Pro	Thr	Ser	Ala	Thr	Asp	Ser	Met	Cys	Leu	Ala	Glu	Ser	Gly	Leu	
			245				250					255			
Ser	Tyr	Pro	Cys	His	Arg	Leu	Thr	Val	Gly	Arg	Arg	Ser	Ser	Pro	Ala
		260				265						270			
Gln	Thr	Arg	Glu	Gln	Ser	Glu	Glu	Gln	Ile	Thr	Asp	Val	His	Met	Val

275	280	285
Ser Asp Ser Asp Gly Asp Asp Phe Glu Asp Ala Thr Glu Phe Gly Val		
290	295	300
Asp Asp Gly Glu Val Phe Gly Met Ala Ser Ser Ala Leu Arg Lys Ser		
305	310	315
Pro Met Ile Cys Phe Leu Val Pro Glu Asn Ala Glu Asn Glu Gly Asp		
325	330	335
Ala Leu Leu Gln Phe Thr Ala Glu Phe Ser Ser Arg Tyr Gly Asp Cys		
340	345	350
His Pro Val Phe Phe Ile Gly Ser Leu Glu Ala Ala Phe Gln Glu Ala		
355	360	365
Phe Tyr Val Lys Ala Arg Asp Arg Lys Leu Leu Ala Ile Tyr Leu His		
370	375	380
His Asp Glu Ser Val Leu Thr Asn Val Phe Cys Ser Gln Met Leu Cys		
385	390	395
Ala Glu Ser Ile Val Ser Tyr Leu Ser Gln Asn Phe Ile Thr Trp Ala		
405	410	415
Trp Asp Leu Thr Lys Asp Ser Asn Arg Ala Arg Phe Leu Thr Met Cys		
420	425	430
Asn Arg His Phe Gly Ser Val Val Ala Gln Thr Ile Arg Thr Gln Lys		
435	440	445
Thr Asp Gln Phe Pro Leu Phe Leu Ile Ile Met Gly Lys Arg Ser Ser		
450	455	460
Asn Glu Val Leu Asn Val Ile Gln Gly Asn Thr Thr Val Asp Glu Leu		
465	470	475
Met Met Arg Leu Met Ala Ala Met Glu Ile Phe Thr Ala Gln Gln Gln		
485	490	495
Glu Asp Ile Lys Asp Glu Asp Glu Arg Glu Ala Arg Glu Asn Val Lys		
500	505	510
Arg Glu Gln Asp Glu Ala Tyr Arg Leu Ser Leu Glu Ala Asp Arg Ala		
515	520	525
Lys Arg Glu Ala His Glu Arg Glu Met Ala Glu Gln Phe Arg Leu Glu		
530	535	540
Gln Ile Arg Lys Glu Gln Glu Glu Glu Arg Glu Ala Ile Arg Leu Ser		
545	550	555
Leu Glu Gln Ala Leu Pro Pro Glu Pro Lys Glu Glu Asn Ala Glu Pro		
565	570	575
Val Ser Lys Leu Arg Ile Arg Thr Pro Ser Gly Glu Phe Leu Glu Arg		
580	585	590
Arg Phe Leu Ala Ser Asn Lys Leu Gln Ile Val Phe Asp Phe Val Ala		
595	600	605
Ser Lys Gly Phe Pro Trp Asp Glu Tyr Lys Leu Leu Ser Thr Phe Pro		
610	615	620
Arg Arg Asp Val Thr Gln Leu Asp Pro Asn Lys Ser Leu Leu Glu Val		
625	630	635
Lys Leu Phe Pro Gln Glu Thr Leu Phe Leu Glu Ala Lys Glu		
645	650	

<210> 6265

<211> 1344

<212> DNA

<213> Homo sapiens

<400> 6265

nnagcacttc cagcctctca ccgacccgga caacaaggtc ttaaccata ttttaactttg
60
aacacctctg gtagtggaac aattcttata gatctgtctc ctgatgataa agagtttcag
120
tctgtggagg aagagatgca aagtacagtt cgagagcaca gagatggagg tcatgcaggt
180
ggaatcttca acagatacaa tattctcaag attcagaagg ttgtaacaa gaaactatgg
240
gaaagataca ctcaccggag aaaagaagtt tctgaagaaa accacaacca tgccaatgaa
300
cgaatgctat ttcattgggtc tccttttgtg aatgcaatta tccacaaagg ctttgatgaa
360
aggcatgcgt acatagggtg tatgtttgga gctggcattt attttgctga aaactcttcc
420
aaaagcaatc aatatgtata tggaattgga ggaggtagtg ggtgtccagt tcacaaagac
480
agatcttggt acatttgcca caggcagctg ctcttttgcc gggtaacctt gggaaagtct
540
ttcctgcagt tcagtgaat gaaaatggca cattctctc caggatcatca ctcagtcact
600
ggtaggcccc gtgtaaatgg cctagcatta gctgaatatg ttatttacag aggagaacag
660
gcttatcctg agtatatta tacttaccag attatgaggc ctgaaggtat ggtcgatgga
720
taaatagtta ttttaagaaa ctaattccac tgaacctaaa atcatcaaag cagcagtggc
780
ctctacgttt tactcctttg ctgaaaaaaa atcatcttgc ccacaggcct gtggcaaaag
840
gataaaaatg tgaacgaagt ttaacattct gacttgataa agctttaata atgtacagtg
900
ttttctaaat atttctgtt ttttcagcac ttttaacagat gccattccag gttaaactgg
960
gttgtctgta cttaaattata aacagagtta acttgaacct tttatatgtt atgcattgat
1020
tctaacaac tgtaatgccc tcaacagaac taattttact aatacaatac tgtgttcttt
1080
aaaacacagc atttacctg aatacaattt catttgtaaa actgtaaata agagcttttg
1140
tactagcccc gtatttattt acattgcttt gtaatatata tctgttttag aactgcagcg
1200
gtttacaaaa ttttttcata tgtattgttc atctatactt catcttacat cgtcatgatt
1260
gagtgatctt tacatttgat tccagaggct atgttcagtt gttagttggg aaagattgag
1320
ttatcagatt taatttgccg atgg
1344

<210> 6266

<211> 240

<212> PRT

<213> Homo sapiens

<400> 6266

Xaa Ala Leu Pro Ala Ser His Arg Pro Gly Gln Gln Gly Leu Asn Pro

1	5	10	15
Tyr Leu Thr	Leu Asn Thr	Ser Gly Ser Gly Thr	Ile Leu Ile Asp Leu
20	25	30	
Ser Pro Asp	Asp Lys Glu Phe Gln	Ser Val Glu Glu Glu	Met Gln Ser
35	40	45	
Thr Val Arg	Glu His Arg Asp Gly Gly	His Ala Gly Gly	Ile Phe Asn
50	55	60	
Arg Tyr Asn	Ile Leu Lys Ile Gln Lys	Val Cys Asn Lys Lys	Leu Trp
65	70	75	80
Glu Arg Tyr	Thr His Arg Arg Lys Glu	Val Ser Glu Glu	Asn His Asn
85	90	95	
His Ala Asn	Glu Arg Met Leu Phe His	Gly Ser Pro Phe	Val Asn Ala
100	105	110	
Ile Ile His	Lys Gly Phe Asp Glu Arg	His Ala Tyr Ile	Gly Gly Met
115	120	125	
Phe Gly Ala	Gly Ile Tyr Phe Ala Glu	Asn Ser Ser Lys	Ser Asn Gln
130	135	140	
Tyr Val Tyr	Gly Ile Gly Gly Gly Thr	Gly Cys Pro Val	His Lys Asp
145	150	155	160
Arg Ser Cys	Tyr Ile Cys His Arg Gln	Leu Leu Phe Cys	Arg Val Thr
165	170	175	
Leu Gly Lys	Ser Phe Leu Gln Phe Ser	Ala Met Lys Met	Ala His Ser
180	185	190	
Pro Pro Gly	His His Ser Val Thr Gly	Arg Pro Ser Val	Asn Gly Leu
195	200	205	
Ala Leu Ala	Glu Tyr Val Ile Tyr Arg	Gly Glu Gln Ala	Tyr Pro Glu
210	215	220	
Tyr Leu Ile	Thr Tyr Gln Ile Met Arg	Pro Glu Gly Met	Val Asp Gly
225	230	235	240

<210> 6267

<211> 328

<212> DNA

<213> Homo sapiens

<400> 6267

gggccctccg gttttctcag ccctggtggg tgaggttggt ggccagggcc tgggccaatc
60

gggagagggg agggctaagc agagtgggga tgcccggcag tgaccagacc tctctcccca
120

gatgagcctt tctgcagtt ccgaaggaac gtgttcttcc caaagcggcg ggagctccag
180

atccatgacg aggaggtcct gcggctgctc tatgaggagg ccaagggcaa cgtgctggct
240

gcacggtacc cgtgcgacgt ggaggactgc gaggctctgg gcgccctggt gtgcgcgctg
300

cagcttgggc cctaccagcc cggccggc
328

<210> 6268

<211> 83

<212> PRT

<213> Homo sapiens

<400> 6268

Ala Glu Trp Gly Cys Pro Ala Val Thr Gln Pro Leu Ser Pro Asp Glu
 1 5 10 15
 Pro Phe Leu Gln Phe Arg Arg Asn Val Phe Phe Pro Lys Arg Arg Glu
 20 25 30
 Leu Gln Ile His Asp Glu Glu Val Leu Arg Leu Leu Tyr Glu Glu Ala
 35 40 45
 Lys Gly Asn Val Leu Ala Ala Arg Tyr Pro Cys Asp Val Glu Asp Cys
 50 55 60
 Glu Ala Leu Gly Ala Leu Val Cys Arg Val Gln Leu Gly Pro Tyr Gln
 65 70 75 80
 Pro Gly Arg

<210> 6269

<211> 923

<212> DNA

<213> Homo sapiens

<400> 6269

nggcggaaga tggcgacgcc cctcgggtgg tcgaaggcgg ggtcaggatc tgtgtgtctc
 60
 gcttttagatc aactgcggga cgtgattgag tctcaggagg aactaatcca ccagctgagg
 120
 aacgtgatgg tttccagga cgaaaatttt gtcagtaaag aagagttcca ggagtgagg
 180
 aagaagctgg tggaagagaa agctgcccat gccaaaacca aggtcctcct ggccaaggaa
 240
 gaggagaagt tacagtttgc cctcggagag gtagaggtgc tatccaagca gctggagaaa
 300
 gagaagctgg cctttgaaaa agcgtctctcc agtgtcaaga gcaaagtcct tcaggagtcc
 360
 agcaagaagg accagctcat caccaagtgc aatgagattg agtctcacat tataaagcaa
 420
 gaagatatac ttaatggcaa agagaatgag attaaagagt tgcagcaagt tatcagccag
 480
 cagaaacaga tcttcagccc accaccagcc ggctccgttg caggaatcac atgtctgact
 540
 tccggatcca gaagcagcag gaaagctaca tggcccaggt gctggaccag aagcataaga
 600
 aagcctcagg gacacgtcag gcccgagcc accagcatcc cagggaaaaa taaaatggcc
 660
 gccgctttcc tgttctctgg ctgtaatccc cagcctctgc cttctctgct ctgggagtcc
 720
 ccagcctcta gccctgcta cttccctccc tcttgatag tggtaggggt ccacaagggtg
 780
 ggggcttgta gcctagggga ggagctgggt ctttgttgte tggtaggcac caccgcttcc
 840
 tttgggtatt taatcccttc ctatataaac agccctgggt acccagtaat attccacccc
 900
 actcccagtg tcctggtaaa ttt
 923

<210> 6270

<211> 307
 <212> PRT
 <213> Homo sapiens

<400> 6270

```

Xaa Arg Lys Met Ala Thr Pro Leu Gly Trp Ser Lys Ala Gly Ser Gly
 1           5           10           15
Ser Val Cys Leu Ala Leu Asp Gln Leu Arg Asp Val Ile Glu Ser Gln
      20           25           30
Glu Glu Leu Ile His Gln Leu Arg Asn Val Met Val Leu Gln Asp Glu
      35           40           45
Asn Phe Val Ser Lys Glu Glu Phe Gln Ala Val Glu Lys Lys Leu Val
      50           55           60
Glu Glu Lys Ala Ala His Ala Lys Thr Lys Val Leu Leu Ala Lys Glu
      65           70           75           80
Glu Glu Lys Leu Gln Phe Ala Leu Gly Glu Val Glu Val Leu Ser Lys
      85           90           95
Gln Leu Glu Lys Glu Lys Leu Ala Phe Glu Lys Ala Leu Ser Ser Val
      100          105          110
Lys Ser Lys Val Leu Gln Glu Ser Ser Lys Lys Asp Gln Leu Ile Thr
      115          120          125
Lys Cys Asn Glu Ile Glu Ser His Ile Ile Lys Gln Glu Asp Ile Leu
      130          135          140
Asn Gly Lys Glu Asn Glu Ile Lys Glu Leu Gln Gln Val Ile Ser Gln
      145          150          155          160
Gln Lys Gln Ile Phe Ser Pro Pro Pro Ala Gly Ser Val Ala Gly Ile
      165          170          175
Thr Cys Leu Thr Ser Gly Ser Arg Ser Ser Arg Lys Ala Thr Trp Pro
      180          185          190
Arg Cys Trp Thr Arg Ser Ile Arg Lys Pro Gln Gly His Val Arg Pro
      195          200          205
Ala Ala Thr Ser Ile Pro Gly Lys Asn Lys Met Ala Ala Ala Phe Leu
      210          215          220
Phe Ser Gly Cys Asn Pro Gln Pro Leu Pro Ser Leu Leu Trp Glu Ser
      225          230          235          240
Pro Ala Ser Ser Pro Cys Tyr Phe Pro Pro Ser Trp Ile Val Val Gly
      245          250          255
Val His Lys Val Gly Ala Cys Ser Leu Gly Glu Glu Leu Gly Leu Cys
      260          265          270
Cys Leu Val Gly Thr Thr Ala Ser Phe Gly Tyr Leu Ile Pro Ser Tyr
      275          280          285
Ile Asn Ser Pro Gly Tyr Pro Val Ile Phe His Pro Thr Pro Ser Val
      290          295          300
Leu Val Asn
305

```

<210> 6271
 <211> 1437
 <212> DNA
 <213> Homo sapiens

<400> 6271

```

nccatggcga cgggcggcca gcagaaggag aacacgctgc ttcacctctt cgccggcggg
60

```

tgtggaggca cagttggtgc tattttcact tgtccactag aagtcattaa gacacggttg
120
cagtcttcaa gattagctct ccggacagtc tactatcctc aggttcatct ggggaccatt
180
agtggagctg gaatggtgag accaacaatcc gtgacacctg gactctttca ggttctgaag
240
gctgtatact ttgcatgtta ctccaaagcc aaagagcaat ttaatggcat tttcgtgcct
300
aacagcaata ttgtgcatct tttctcagct ggctctgcag cttttatcac aaattcctta
360
atgaatccta tatggatggt taaaacccga atgcagctag aacagaaagt gaggggctct
420
aagcagatga atacactcca gtgtgctcgt tacgtttacc agaccgaagg cattcgtggc
480
ttctatagag gattaactgc ctggtatgct ggaatttccg aaactataat ctgctttgct
540
atztatgaaa gtttaaagaa gtatctgaaa gaagctccat tagcctcttc tgcaaatggg
600
actgagaaaa attccacaag tttttttgga cttatggcag ctgctgctct ttctaagggc
660
tgtgcctcct gcattgctta tccacacgaa gtcataagga cgaggctccg ggaagagggc
720
accaagtaca agtcttttgt ccagacggcg cgctgtgtgt tccgggaaga aggctacctt
780
gccttttata gaggactggt tgcccagctt atccggcaga tcccaaatac tgccattgtg
840
ttgtctactt atgagttaat tgtgtacctg ttagaagacc gtactcagta acaggccgga
900
aaattgtgct ctagaagaat aaaactgaaa aactctagag aatttttttt ccccatgat
960
gtttagaaag tttgagactg aaacaggaaa ggccataaaa tatctggttc atatcacctg
1020
ttggacattt ctttttgat tcatgctttc tggaagggtt aaattcatta acgttaatag
1080
ttaattataa cttttttttt aacttaagag gattcagggt taagcaccaa cttaaattaa
1140
tcatgctatt taatttaagt atacatttgg cttgtgtcct cttttatgct cactatacta
1200
tgaaggactt aagtaattca gataaacctg ccctagaact gcagagaaaa atgataaagt
1260
gagaatacaa cttgttttat aatctgactt taagatcttg cactgctaga cagggagaa
1320
gtgtcgcat tgggtgggc actgtggctc acgctgttaa tcccagcact ttgggaggcc
1380
gagggtgggtg gatcacaagg tcaggagatc gagaccatcc tggctaacca cctgcag
1437

<210> 6272

<211> 296

<212> PRT

<213> Homo sapiens

<400> 6272

Xaa Met Ala Thr Gly Gly Gln Gln Lys Glu Asn Thr Leu Leu His Leu

```

1           5           10           15
Phe Ala Gly Gly Cys Gly Gly Thr Val Gly Ala Ile Phe Thr Cys Pro
20           25           30
Leu Glu Val Ile Lys Thr Arg Leu Gln Ser Ser Arg Leu Ala Leu Arg
35           40           45
Thr Val Tyr Tyr Pro Gln Val His Leu Gly Thr Ile Ser Gly Ala Gly
50           55           60
Met Val Arg Pro Thr Ser Val Thr Pro Gly Leu Phe Gln Val Leu Lys
65           70           75           80
Ala Val Tyr Phe Ala Cys Tyr Ser Lys Ala Lys Glu Gln Phe Asn Gly
85           90           95
Ile Phe Val Pro Asn Ser Asn Ile Val His Leu Phe Ser Ala Gly Ser
100          105          110
Ala Ala Phe Ile Thr Asn Ser Leu Met Asn Pro Ile Trp Met Val Lys
115          120          125
Thr Arg Met Gln Leu Glu Gln Lys Val Arg Gly Ser Lys Gln Met Asn
130          135          140
Thr Leu Gln Cys Ala Arg Tyr Val Tyr Gln Thr Glu Gly Ile Arg Gly
145          150          155          160
Phe Tyr Arg Gly Leu Thr Ala Ser Tyr Ala Gly Ile Ser Glu Thr Ile
165          170          175
Ile Cys Phe Ala Ile Tyr Glu Ser Leu Lys Lys Tyr Leu Lys Glu Ala
180          185          190
Pro Leu Ala Ser Ser Ala Asn Gly Thr Glu Lys Asn Ser Thr Ser Phe
195          200          205
Phe Gly Leu Met Ala Ala Ala Leu Ser Lys Gly Cys Ala Ser Cys
210          215          220
Ile Ala Tyr Pro His Glu Val Ile Arg Thr Arg Leu Arg Glu Glu Gly
225          230          235          240
Thr Lys Tyr Lys Ser Phe Val Gln Thr Ala Arg Leu Val Phe Arg Glu
245          250          255
Glu Gly Tyr Leu Ala Phe Tyr Arg Gly Leu Phe Ala Gln Leu Ile Arg
260          265          270
Gln Ile Pro Asn Thr Ala Ile Val Leu Ser Thr Tyr Glu Leu Ile Val
275          280          285
Tyr Leu Leu Glu Asp Arg Thr Gln
290          295

```

<210> 6273

<211> 2355

<212> DNA

<213> Homo sapiens

<400> 6273

```

ncgaggatca ttgcagaggc cctgactega gtcactctaca acctgacaga gaaggggaca
60
ccccagacat gccggtgttc acagagcaga tgatccagca ggagcagctg gactcgggtga
120
tggactggct caccaaccag ccgcggccgg cagctggtgg acaaggacag caccttcttc
180
agcacgctgg agcaccacct gagccgctac ctgaaggacg tgaagcagca ccacgtcaag
240
gctgacaagc gggaccacaga gtttgtcttc tacgaccagc tgaagcaagt gatgaatgcg
300

```

tacagagtca agccggccgt ctttgacctg ctcttggttg ttggcattgc tgctacctc
360
ggcatggcct acgtggctgt ccaggtgagc agtgcccagg ctgagcactt cagcctcctc
420
tacaagaccg tccagaggct gctcgtgaag gccaagacac agtgacacag ccacccccac
480
agccggagcc cccgcccgtc cacagtccct ggggcccagc acgagtgagt ggacactgcc
540
ccgcccggg cgccctgca gggacagggg ccctctccct ccccgccggt ggttggaaca
600
ctgaattaca gagctttttt ctgttgctct ccgagactgg ggggggattg tttcttcttt
660
tccttgcttt tgaacttctt tggaggagag cttgggagac gtcccggggc caggctacgg
720
acttgccgac gagccccca gtctgggag ccggcccgc tcggtctggt gtaagcacac
780
atgcacgatt aaagaggaga cggcgggacc ccctgcccga tcgcgcgcgg cctccgcccc
840
ccgctcctg ccgcaagggg cctggactgc aggcctgacc tgctccctgc tccgtgtctg
900
tcctaggacg tccccctccg ctccccgatg gtggcgtgga catggttatt tatctctgct
960
ccttcttgcc tggaggaggg cagtgccagc cctggggttc tgggattcca gccctcctgg
1020
agccttttgt tccccatgtg gtctcagtga cccgtcccc tgacagtggg ctcggggagc
1080
tgcacacc agccttcccc ttctccgact gcagggtctg atgtcatcgt tgacagcett
1140
tgcttcgtgg gggcctggca ggcctgnncc tccccgacct ccgacctact gcaaaccacc
1200
gttccctgc actcctcttc tcccagccca tccctccggc cctgtgcct ctgcggcccc
1260
agccagctc ccagggccgt cacctgcttg gccctggcca gctccctgcc ctgagtcctg
1320
agccagtgc tgggttttcc tgggctcggg actgggcccc caggcnatcc agggctttgc
1380
acggccagt ttgtcctccct ggggaactgg gtgcgggtgg agtactggga ggcaggaggt
1440
ggcccgggga ggccttgtag ctctccctc cgctcctgc cctgggctc aagttcctca
1500
tcaatagaaa gtagtgttc ggggtggggg cgtcaggtag gaacgtttgc tgggaaggag
1560
aggacttggg gcatggctct ggggcacct tcctggaact cagagaggaa ggtccgggcc
1620
ctcgggaagc cttggacaga accctccacc ccgagacca ggcgtcgtgt gtgtgtggga
1680
gagaaggagg ccggtgttga gctcaggag accccggtgt gtccgttctt tagcaatata
1740
acctaccag tgcgtgccga gcaggettgg tggggaaggg acttgagctg ggcaagtctt
1800
ggcctggcac ccgagccgt ctcccttccg tggcccaggg aggtgtttgc tgtccgaagg
1860
acctgggccg gcccatggga gcctgggggt ctgtccagat aggaccaggg ggtctcactt
1920

tggccaccag ttcttcggcc agcactcttg cctccagaa cctgcagcct ggaggggtga
 1980
 ggggacaacc accctcttt cctccaggtt ggcaggggac cctcttctcc cgtctgccct
 2040
 gcgggttgcc cgcctctcc agagacttgc ccaagggccc atcaccactg gcctctgggc
 2100
 acttgtgctg agactctggg acccaggcag ctgccacctt gtcaccatga gagaatttgg
 2160
 ggagtgttg catgctagcc agcaggctcc tgtctgggtg ccacggggcc agcattttgg
 2220
 agggagcttc cttcttctc tcctggacag gtcgtcagga tggatgcact gactgaccgt
 2280
 ctggggctca ggctgggtg ggatgcagcc ggccgatgag aaaataaagc catattgaat
 2340
 gatcaaaaaa aaaaa
 2355

<210> 6274
 <211> 70
 <212> PRT
 <213> Homo sapiens

<400> 6274
 Asp Pro Glu Phe Val Phe Tyr Asp Gln Leu Lys Gln Val Met Asn Ala
 1 5 10 15
 Tyr Arg Val Lys Pro Ala Val Phe Asp Leu Leu Leu Ala Val Gly Ile
 20 25 30
 Ala Ala Tyr Leu Gly Met Ala Tyr Val Ala Val Gln Val Ser Ser Ala
 35 40 45
 Gln Ala Gln His Phe Ser Leu Leu Tyr Lys Thr Val Gln Arg Leu Leu
 50 55 60
 Val Lys Ala Lys Thr Gln
 65 70

<210> 6275
 <211> 1534
 <212> DNA
 <213> Homo sapiens

<400> 6275
 gggcggtagc gacaggccag agctgcggcc tgagcagcca gcgtccggca tgaaggtctg
 60
 gggctctggct gctgcctgct tcttgctcca gcaccatgga atgcctgcgc agtttaccct
 120
 gcctctgcc ccgcgcgatg agacttcccc ggcggacgct gtgtgccctg gccttggaag
 180
 tgacctctgt gggctctccc gttgctgect gcggccgccc agccaacctg attggaagga
 240
 gccgagcggc gcagctttgc gggcccgaac ggctccgctt ggcaggtgaa gtgcaccggt
 300
 ttagaacctc tgacgtctct caagccactt tagccagtgt agccccagta tttactgtga
 360
 caaaatttga caaacaggga aacgttactt cttttgaaag gaagaaaact gaattatacc
 420

aagagttagg tcttcaagcc agagatttga gatttcagca tgtaatgagt atcacagtca
480
gaaacaatag gattatcatg agaatggagt atttgaaagc tgtgataact ccagagtgtc
540
ttctgatatt agattatcgt aatttaaact tagagcaatg gctgttccgg gaactccctt
600
cacagttgtc tggagaggggt caactcggtta catacccttt acccttttgag tttagagcta
660
tagaagcact cctgcaatat tggatcatgt tgttatctag atcaacaccc ttcaggggaa
720
acttagcatt ttgcagccac tgatccttga gaccttggat gctttggtgg accccaaaca
780
ttcttctgta gacagaagca aactgcacat tttactacag aatggcaaaa gtctatcaga
840
gttagaaca gatattaaaa ttttcaaaga gtcaattttg gagatcttgg atgaggaaga
900
gttgctagaa gagctctgtg tatcaaatg ggagtgaccc acaagtcttt gnaaaagagc
960
agtgtggga ttgaccatgc agaagaaatg gagttgctgt tggaaaacta ctaccgattg
1020
gctgacgac tctccaatgc agctcgtgag cttaggggtgc tgattgatga ttcacaaagt
1080
attattttca ttaatctgga cagccaccga aacgtgatga ttaggttgaa tctacagctg
1140
accatgggaa cttctctctt ttcgctcttt ggactaatgg gagttgcttt tggaatgaat
1200
ttggaatctt cccttgaaga ggaccataga attttttggc tgattacagg aattatgttc
1260
atgggaagt ggcctcatctg gaggcgctg ctttcattcc ttggacgaca gctagaagct
1320
ccattgcctc ctatgatggc ttctttacct aaaaagactc ttctggcaga tagaagcatg
1380
gaattgaaaa atagcctcag actggatgga cttggatcag gaaggagcat cctaacaaac
1440
cgtttagaac agccccgtgg atactgaagt tttttttatg gtagttacag gaaacttctg
1500
atactctttt tattattttc ttgtatagag tcag
1534

<210> 6276

<211> 172

<212> PRT

<213> Homo sapiens

<400> 6276

Met	Gly	Val	Thr	His	Lys	Ser	Leu	Xaa	Lys	Ser	Ser	Ala	Gly	Ile	Asp
1				5					10					15	
His	Ala	Glu	Glu	Met	Glu	Leu	Leu	Leu	Glu	Asn	Tyr	Tyr	Arg	Leu	Ala
		20					25						30		
Asp	Asp	Leu	Ser	Asn	Ala	Ala	Arg	Glu	Leu	Arg	Val	Leu	Ile	Asp	Asp
		35					40					45			
Ser	Gln	Ser	Ile	Ile	Phe	Ile	Asn	Leu	Asp	Ser	His	Arg	Asn	Val	Met
	50					55				60					
Ile	Arg	Leu	Asn	Leu	Gln	Leu	Thr	Met	Gly	Thr	Phe	Ser	Leu	Ser	Leu

65		70		75		80									
Phe	Gly	Leu	Met	Gly	Val	Ala	Phe	Gly	Met	Asn	Leu	Glu	Ser	Ser	Leu
			85						90					95	
Glu	Glu	Asp	His	Arg	Ile	Phe	Trp	Leu	Ile	Thr	Gly	Ile	Met	Phe	Met
			100					105					110		
Gly	Ser	Gly	Leu	Ile	Trp	Arg	Arg	Leu	Leu	Ser	Phe	Leu	Gly	Arg	Gln
		115				120						125			
Leu	Glu	Ala	Pro	Leu	Pro	Pro	Met	Met	Ala	Ser	Leu	Pro	Lys	Lys	Thr
	130					135					140				
Leu	Leu	Ala	Asp	Arg	Ser	Met	Glu	Leu	Lys	Asn	Ser	Leu	Arg	Leu	Asp
145					150					155					160
Gly	Leu	Gly	Ser	Gly	Arg	Ser	Ile	Leu	Thr	Asn	Arg				
			165					170							

<210> 6277

<211> 1206

<212> DNA

<213> Homo sapiens

<400> 6277

gctagcatgg cggatgatgga aggagacttg gtgaagaagg aaagctttgg tgtgaagctt
60
atggacttcc aggccaccg gcggggtggc actctaaata gaaagcacat atcccccgct
120
ttccagccgc cacttccgcc cacagatggc agcacctggg tgcccgtggg cccagagccc
180
cctccccaga gctctagggc tgaaagcagc tctgggggtg ggactgtccc ctcttccgag
240
ggcactatgg agcagggggc gagcccaggc gacggcagtc ctcccaaacc gaaggaccct
300
gtatctgcag ctgtgccagc accangggag aaacaacagt cagatagcat ctggccaaaa
360
tcagccccag gcagctgctg gctcccacca gctctccatg ggccacctca caatgctgca
420
gggcccagcc cgcatacact gcgcagagct gttaaaaaac ccgctccagc acccccgaaa
480
ccgggcaacc cacctcctgg ccaccccggg ggccagagtt cttcaggaac atctcagcat
540
ccaccagtc tgtcacaaa gccaccacc cgaagccctt ctctccacc cagcacacgg
600
gccagcctcc aggccagccc tccgcccctt cccagctctc agcaccctgg aggtactcca
660
ngcagcttgt ctccaatcca agctcccaat caccacccgc cgcagccccc tacgcaggcc
720
acgccactga tgcacaccaa acccaatagc cagggccctc ccaaccccat ggcattgccc
780
agtgcagatg gacttgagca gccatctcac accctcccc agactccaac gccccccagt
840
actccgcccc taggaaaaca gaacccagct ctgccagctc ctccagacct ggcagggggg
900
aacctgaaa ctgcacagcc acatgctgga acctaccga gaccgagacc agtaccaaa
960
ccaaggaacc ggcccagcgt gcccacccc cccaacctc ctggtgtcca ctccagctggg
1020

gacagcagcc tcaccaacac agcaccaaca gcttccaaga tagtaacaga ctccaattcc
 1080
 aggggtttcag aaccgcatcg cagcatcttt cctgaaatgc actcagactc agccagcaaa
 1140
 gacgtgcctg gccgcaccc gctggatata gacaatgata ccgagagcac tgcctctgtga
 1200
 agaaaag
 1206

<210> 6278

<211> 399

<212> PRT

<213> Homo sapiens

<400> 6278

Ala	Ser	Met	Ala	Val	Met	Glu	Gly	Asp	Leu	Val	Lys	Lys	Glu	Ser	Phe
1				5					10				15		
Gly	Val	Lys	Leu	Met	Asp	Phe	Gln	Ala	His	Arg	Arg	Gly	Gly	Thr	Leu
		20					25					30			
Asn	Arg	Lys	His	Ile	Ser	Pro	Ala	Phe	Gln	Pro	Pro	Leu	Pro	Pro	Thr
	35					40					45				
Asp	Gly	Ser	Thr	Val	Val	Pro	Ala	Gly	Pro	Glu	Pro	Pro	Pro	Gln	Ser
50					55				60						
Ser	Arg	Ala	Glu	Ser	Ser	Ser	Gly	Gly	Gly	Thr	Val	Pro	Ser	Ser	Ala
65				70					75				80		
Gly	Ile	Leu	Glu	Gln	Gly	Pro	Ser	Pro	Gly	Asp	Gly	Ser	Pro	Pro	Lys
		85						90				95			
Pro	Lys	Asp	Pro	Val	Ser	Ala	Ala	Val	Pro	Ala	Pro	Xaa	Glu	Lys	Gln
	100						105					110			
Gln	Ser	Asp	Ser	Ile	Trp	Pro	Lys	Ser	Ala	Pro	Gly	Ser	Cys	Trp	Leu
	115					120					125				
Pro	Pro	Ala	Leu	His	Gly	Pro	Pro	His	Asn	Ala	Ala	Gly	Pro	Ser	Pro
	130				135				140						
His	Thr	Leu	Arg	Arg	Ala	Val	Lys	Lys	Pro	Ala	Pro	Ala	Pro	Pro	Lys
145				150					155					160	
Pro	Gly	Asn	Pro	Pro	Pro	Gly	His	Pro	Gly	Gly	Gln	Ser	Ser	Ser	Gly
		165				170					175				
Thr	Ser	Gln	His	Pro	Pro	Ser	Leu	Ser	Pro	Lys	Pro	Pro	Thr	Arg	Ser
	180					185					190				
Pro	Ser	Pro	Pro	Pro	Ser	Thr	Arg	Ala	Ser	Leu	Gln	Ala	Ser	Pro	Pro
	195				200				205						
Pro	Pro	Pro	Ser	Ser	Gln	His	Pro	Gly	Gly	Thr	Pro	Xaa	Ser	Leu	Ser
	210				215				220						
Pro	Ile	Gln	Ala	Pro	Asn	His	Pro	Pro	Pro	Gln	Pro	Pro	Thr	Gln	Ala
225				230					235					240	
Thr	Pro	Leu	Met	His	Thr	Lys	Pro	Asn	Ser	Gln	Gly	Pro	Pro	Asn	Pro
		245				250					255				
Met	Ala	Leu	Pro	Ser	Glu	His	Gly	Leu	Glu	Gln	Pro	Ser	His	Thr	Pro
	260				265				270						
Pro	Gln	Thr	Pro	Thr	Pro	Pro	Ser	Thr	Pro	Pro	Leu	Gly	Lys	Gln	Asn
	275				280				285						
Pro	Ser	Leu	Pro	Ala	Pro	Gln	Thr	Leu	Ala	Gly	Gly	Asn	Pro	Glu	Thr
	290				295				300						
Ala	Gln	Pro	His	Ala	Gly	Thr	Leu	Pro	Arg	Pro	Arg	Pro	Val	Pro	Lys

```

305          310          315          320
Pro Arg Asn Arg Pro Ser Val Pro Pro Pro Pro Gln Pro Pro Gly Val
          325          330          335
His Ser Ala Gly Asp Ser Ser Leu Thr Asn Thr Ala Pro Thr Ala Ser
          340          345          350
Lys Ile Val Thr Asp Ser Asn Ser Arg Val Ser Glu Pro His Arg Ser
          355          360          365
Ile Phe Pro Glu Met His Ser Asp Ser Ala Ser Lys Asp Val Pro Gly
          370          375          380
Arg Ile Leu Leu Asp Ile Asp Asn Asp Thr Glu Ser Thr Ala Leu
385          390          395

```

<210> 6279

<211> 2795

<212> DNA

<213> Homo sapiens

<400> 6279

```

atggctgctg agaagcaggt cccaggcggc ggcggcggcg gcggcggcag tggcggcggc
60
ggtggacgtg gtgccggagg ggaagaaaat aaagaaaacg aacgcccttc ggccggatcg
120
aaggcaaca aagaatttgg ggatagcctg agtttggaga ttcttcagat tattaaggaa
180
tcccagcagc agcatggttt acggcatgga gattttcaga ggtacagggg ctactgttcc
240
cgtagacaaa gacgtcttcg aaaaacactc aacttcaaga tgggtaacag acacaaattc
300
acagggaaga aagtgactga agagcttctg accgataata gatacttgct tctggttctg
360
atggatgctg aaagagcctg gagctacgcc atgcagctga aacaggaagc caacactgaa
420
cccgaaaac ggtttcactt gttatctcgc ctacgcaaag ccgtgaagca tgcagaggaa
480
ttggaacgct tgtgtaagag caatcgctg gatgccaaga ccaaattaga ggctcaggct
540
tacacagctt acctctcagg aatgctacgt tttgaacatc aagaatggaa agctgccatt
600
gaggctttta acaaatgcaa aactatctat gagaagctag ccagtgtttt cacagaggag
660
caggctgtgc tgtataacca acgtgtggaa gagatttcac ccaacatccg ctattgtgca
720
tataatattg gggaccagtc agccatcaat gaactcatgc agatgagatt gaggtctggg
780
ggcactgaag gtctcttggc tgaaaaattg gaggtcttga tcaactcagac tcgagccaaa
840
caggcagcta ccattgagtg agtggagtg agaggagaa cggttccagt gaagattgac
900
aaagtgcgca ttttcttatt aggactggct gataacgaag cagctattgt ccaggctgaa
960
agcgaagaaa ctaaggagcg cctgtttgaa tcaatgctca gcgagtgtcg ggacgccatc
1020
cagggtggtc gggaggagct caagccagat cagaacaga gagattatat ccttgaagga
1080

```

gagccaggga aggtgtctaa tcttcaatac ttgcatagct acctgactta catcaagcta
1140
tcaacggcaa tcaagcgtaa tgagaacatg gccaaaggtc tgcacagggc tctgctgcag
1200
cagcagccag aggatgacag caagcgctca ccccgcccc aggaacctgat ccgactctat
1260
gacatcatct tacagaatct ggtggaattg ctccagcttc ctggtttaga ggaagacaaa
1320
gccttccaga aagagatagg cctcaagact ctggtgttca aagcttacag gtgttttttc
1380
attgctcagt cctatgtgct ggtgaagaag tggagcgaag cccttgcct gtatgacaga
1440
gtctgaaat atgcaaatga agtaaattct gatgtggcg ccttcaagaa cagcctaaag
1500
gacctgcctg atgtgcaaga gctcatcact caagtgcgtt cagagaagtg ctccctgcag
1560
gccgcagcca tctttagtgc aaacgacgct catcaaacag agacctctc ctcccaagtc
1620
aaggacaata agcctctggt tgaacggtt gagacattct gcctggacct tccctgtgc
1680
accaagcaag ccaaccttgt gcatttccca ccaggcttcc agcccatctc ctgcaagcct
1740
ttgttctttg acctggccct caaccatgtg gctttccac cccttgagga caagttggaa
1800
cagaagacca agagtggcct cactggatac atcaagggca tctttggatt caggagctaa
1860
ccaggctctt cctcgggggc gggggagatt ctgactctta atctgtattg tgagaaaatc
1920
ccagcaagtt ccatgatatt aaatccaggt ctgcattggc ccggggcaag agtttaacat
1980
cttcggccct gcattcctac atcttgtgtc tgtacacgtt cttaagcagc gtgtcaggag
2040
agcaccctgt tgtcttctgg taaatgtgtg cagggtcctc ctgtctctg tacctcctgg
2100
gaaaggggccc gctgtgtctt ggtgcctgt gagctgtgat tgattgcctt tggtcagtaa
2160
tgctttcagg agtccacacc aggcacagat ggggccttga aacgctttgt catgcttctt
2220
cagtaccatg gatttgaaat gaactcatcc ttgctgtgag catccaggag cccttgagaa
2280
gtttatctat gactatgaaa ctggcaacgt caccacagaa ttacggtcag ccttattccc
2340
cttcacctcc cagtgaacgc taagaagttt cagacaagca gagagctcta tttttagaag
2400
aaatatgtta cactcagaaa tgatgaaacc aaatcttata ttaaaaggca aagatgacgg
2460
agactgtgcc ctttcttat atgccctccc tcatgtccag tccccgttct ctctcggga
2520
gcctagtgtc gtgaagccgg tgaggtcaag tgtaacctga cttaccggca actaggtgag
2580
gctgatgcca gatacacatg tttagggcac ttttttcag gacttccaa tgtgtaattt
2640
ttagatgcca ttatatatta atccccctcg ttaccccccg ttttctcta gtcacccctt
2700

ttcacttcta ttataacatc aataatagaa gtcacaaaaa caatgtaaga aagcaaggaa

2760

taaaagtcat ttaaacaatgt aaaaaaaaaa aaaaa

2795

<210> 6280

<211> 619

<212> PRT

<213> Homo sapiens

<400> 6280

Met	Ala	Ala	Glu	Lys	Gln	Val	Pro	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly
1				5					10						15	
Ser	Gly	Gly	Gly	Gly	Gly	Arg	Gly	Ala	Gly	Gly	Glu	Glu	Asn	Lys	Glu	
			20					25					30			
Asn	Glu	Arg	Pro	Ser	Ala	Gly	Ser	Lys	Ala	Asn	Lys	Glu	Phe	Gly	Asp	
		35						40				45				
Ser	Leu	Ser	Leu	Glu	Ile	Leu	Gln	Ile	Ile	Lys	Glu	Ser	Gln	Gln	Gln	
	50				55						60					
His	Gly	Leu	Arg	His	Gly	Asp	Phe	Gln	Arg	Tyr	Arg	Gly	Tyr	Cys	Ser	
65				70						75					80	
Arg	Arg	Gln	Arg	Arg	Leu	Arg	Lys	Thr	Leu	Asn	Phe	Lys	Met	Gly	Asn	
				85					90					95		
Arg	His	Lys	Phe	Thr	Gly	Lys	Lys	Val	Thr	Glu	Glu	Leu	Leu	Thr	Asp	
			100					105					110			
Asn	Arg	Tyr	Leu	Leu	Val	Leu	Met	Asp	Ala	Glu	Arg	Ala	Trp	Ser		
115				120					125							
Tyr	Ala	Met	Gln	Leu	Lys	Gln	Glu	Ala	Asn	Thr	Glu	Pro	Arg	Lys	Arg	
	130			135							140					
Phe	His	Leu	Leu	Ser	Arg	Leu	Arg	Lys	Ala	Val	Lys	His	Ala	Glu	Glu	
145				150						155				160		
Leu	Glu	Arg	Leu	Cys	Lys	Ser	Asn	Arg	Val	Asp	Ala	Lys	Thr	Lys	Leu	
			165						170					175		
Glu	Ala	Gln	Ala	Tyr	Thr	Ala	Tyr	Leu	Ser	Gly	Met	Leu	Arg	Phe	Glu	
			180					185					190			
His	Gln	Glu	Trp	Lys	Ala	Ala	Ile	Glu	Ala	Phe	Asn	Lys	Cys	Lys	Thr	
	195						200					205				
Ile	Tyr	Glu	Lys	Leu	Ala	Ser	Ala	Phe	Thr	Glu	Glu	Gln	Ala	Val	Leu	
	210			215								220				
Tyr	Asn	Gln	Arg	Val	Glu	Glu	Ile	Ser	Pro	Asn	Ile	Arg	Tyr	Cys	Ala	
225				230						235				240		
Tyr	Asn	Ile	Gly	Asp	Gln	Ser	Ala	Ile	Asn	Glu	Leu	Met	Gln	Met	Arg	
			245						250					255		
Leu	Arg	Ser	Gly	Gly	Thr	Glu	Gly	Leu	Leu	Ala	Glu	Lys	Leu	Glu	Ala	
		260					265						270			
Leu	Ile	Thr	Gln	Thr	Arg	Ala	Lys	Gln	Ala	Ala	Thr	Met	Ser	Glu	Val	
	275						280					285				
Glu	Trp	Arg	Gly	Arg	Thr	Val	Pro	Val	Lys	Ile	Asp	Lys	Val	Arg	Ile	
	290				295						300					
Phe	Leu	Leu	Gly	Leu	Ala	Asp	Asn	Glu	Ala	Ala	Ile	Val	Gln	Ala	Glu	
305				310						315					320	
Ser	Glu	Glu	Thr	Lys	Glu	Arg	Leu	Phe	Glu	Ser	Met	Leu	Ser	Glu	Cys	
			325						330					335		
Arg	Asp	Ala	Ile	Gln	Val	Val	Arg	Glu								

340 345 350
 Gln Arg Asp Tyr Ile Leu Glu Gly Glu Pro Gly Lys Val Ser Asn Leu
 355 360 365
 Gln Tyr Leu His Ser Tyr Leu Thr Tyr Ile Lys Leu Ser Thr Ala Ile
 370 375 380
 Lys Arg Asn Glu Asn Met Ala Lys Gly Leu His Arg Ala Leu Leu Gln
 385 390 395 400
 Gln Gln Pro Glu Asp Asp Ser Lys Arg Ser Pro Arg Pro Gln Asp Leu
 405 410 415
 Ile Arg Leu Tyr Asp Ile Ile Leu Gln Asn Leu Val Glu Leu Leu Gln
 420 425 430
 Leu Pro Gly Leu Glu Glu Asp Lys Ala Phe Gln Lys Glu Ile Gly Leu
 435 440 445
 Lys Thr Leu Val Phe Lys Ala Tyr Arg Cys Phe Phe Ile Ala Gln Ser
 450 455 460
 Tyr Val Leu Val Lys Lys Trp Ser Glu Ala Leu Val Leu Tyr Asp Arg
 465 470 475 480
 Val Leu Lys Tyr Ala Asn Glu Val Asn Ser Asp Ala Gly Ala Phe Lys
 485 490 495
 Asn Ser Leu Lys Asp Leu Pro Asp Val Gln Glu Leu Ile Thr Gln Val
 500 505 510
 Arg Ser Glu Lys Cys Ser Leu Gln Ala Ala Ala Ile Leu Asp Ala Asn
 515 520 525
 Asp Ala His Gln Thr Glu Thr Ser Ser Ser Gln Val Lys Asp Asn Lys
 530 535 540
 Pro Leu Val Glu Arg Phe Glu Thr Phe Cys Leu Asp Pro Ser Leu Val
 545 550 555 560
 Thr Lys Gln Ala Asn Leu Val His Phe Pro Pro Gly Phe Gln Pro Ile
 565 570 575
 Pro Cys Lys Pro Leu Phe Phe Asp Leu Ala Leu Asn His Val Ala Phe
 580 585 590
 Pro Pro Leu Glu Asp Lys Leu Glu Gln Lys Thr Lys Ser Gly Leu Thr
 595 600 605
 Gly Tyr Ile Lys Gly Ile Phe Gly Phe Arg Ser
 610 615

<210> 6281

<211> 741

<212> DNA

<213> Homo sapiens

<400> 6281

nnctgggttg agagctgtcc ccggttctcc gttctgctct cgggggcacc ttccgggggtt
 60
 cctaagccgc ggggccctc gctgccctc gaggccctt ccctgacctt ggctttggcc
 120
 tgggctactc gttccggagc cgccatgtcg tccgacttcg aagggttacga gcaggacttc
 180
 gcggtgctca ctgcagagat caccagcaag attgcgaggg tcccacgact cccgcctgat
 240
 gaaaagaaac agatgggttg aaatgtggag aaacagcttg aagaagcgaa agaactgctt
 300
 gaacagatgg atttggaagt ccgagagata ccaccccaaa gtcgagggat gtacagcaac
 360

agaatgagaa gctacaaaca agaatggga aaactcgaaa cagatttttaa aaggtcacgg
 420
 atcgcttaca gtgacgaagt acggaatgag ctctctggggg atgatgggaa ttcctcagag
 480
 aaccagaggg cacatctgct cgataacaca gagaggctgg aaaggctatc tcggagacta
 540
 gaggctggat accaaatagc agtggaacc ggtgagaatt ctgagagtga gcaaattgtc
 600
 ttgcttatgc acagcagtct tcacaacaca tgacatttca gggaaacttc aaaggagtag
 660
 cagagacagc agcccgagat gtggtttaca tattggggag acaattggga gcttatctgc
 720
 gcttatcttt ttgcaagtta g
 741

<210> 6282

<211> 162

<212> PRT

<213> Homo sapiens

<400> 6282

Met	Ser	Ser	Asp	Phe	Glu	Gly	Tyr	Glu	Gln	Asp	Phe	Ala	Val	Leu	Thr
1			5					10					15		
Ala	Glu	Ile	Thr	Ser	Lys	Ile	Ala	Arg	Val	Pro	Arg	Leu	Pro	Pro	Asp
			20				25					30			
Glu	Lys	Lys	Gln	Met	Val	Ala	Asn	Val	Glu	Lys	Gln	Leu	Glu	Glu	Ala
		35				40					45				
Lys	Glu	Leu	Leu	Glu	Gln	Met	Asp	Leu	Glu	Val	Arg	Glu	Ile	Pro	Pro
	50				55					60					
Gln	Ser	Arg	Gly	Met	Tyr	Ser	Asn	Arg	Met	Arg	Ser	Tyr	Lys	Gln	Glu
65					70				75					80	
Met	Gly	Lys	Leu	Glu	Thr	Asp	Phe	Lys	Arg	Ser	Arg	Ile	Ala	Tyr	Ser
			85					90					95		
Asp	Glu	Val	Arg	Asn	Glu	Leu	Leu	Gly	Asp	Asp	Gly	Asn	Ser	Ser	Glu
			100					105					110		
Asn	Gln	Arg	Ala	His	Leu	Leu	Asp	Asn	Thr	Glu	Arg	Leu	Glu	Arg	Ser
		115				120						125			
Ser	Arg	Arg	Leu	Glu	Ala	Gly	Tyr	Gln	Ile	Ala	Val	Glu	Thr	Gly	Glu
	130					135					140				
Asn	Ser	Glu	Ser	Glu	Gln	Ile	Val	Leu	Leu	Met	His	Ser	Ser	Leu	His
145					150				155					160	
Asn	Thr														

<210> 6283

<211> 2312

<212> DNA

<213> Homo sapiens

<400> 6283

nnattcttga agtggtttcc atattctgat ctccaggcctg tgcgagtga gagttttatg
 60
 agcaaggact ggaaggaacc agagacaaac aagggtggtg gggttgctgg gagtgggatg
 120

gtagctaagc atgtcattta ctgttcttgt tgcttgggta atagggcaca atgaggaagc
180
tagcacggta gtgggcaatg ccagggtggga aggtttgagt tgtgaaagaa gagccaggga
240
gcagagatgg ggaggaggca ctgatggggt gggatgtgct ttggtcacac atagcacagt
300
cgggtgtgtc ctcctttttg tccacagtgg ttcttgggct ttgtgtctt cctcctgccc
360
tgggcgtcca tgtggctgcg cagcctccta aaacctatcc acgtcttttt tggagccgcc
420
atcctctctc tgtccatcgc atccgtcatt tcgggcatta atgagaagct tttcttcagt
480
ttgaaaaaca ccaccaggcc ataccacagc ctgcccagtg aggcgggtctt tgccaacagc
540
accgggatgc tgggtggggc ctttgggctg ctggtgctct acatccttct ggcttcctct
600
tggaagcgcc cagagccggg gatcctgacc gacagacagc ccctgctgca tgatggggag
660
tgaagcagca ggaaggggct cccaagagct cctgggtggtg cagcctgtgc tcccctcaga
720
agctctgtc tcccagggc tcccggtggtg tttcagcagg cgaactttctt ccaatgctgg
780
gccagactt cttgcctggg tgctggcctg cctctcccg ccgcttgctg cctgtctgct
840
ttccttggtg gctttgctg ggtgctgggc ctgccctctc cggccgcttg ctgctgtct
900
gctttccttg gtggctttgc ctgggtgctg ggcctgcctt ctctggctgc ttgtgctg
960
tctgctttcc ttgggtgctt tggttctgc actccttggc gtcagcctct caggctctcc
1020
attcacacga ggtcctcctc gctctggccg ctcttgctgc tctgtctga agaaatcaga
1080
ctgatttctt cttaagactc ctagggatgt ggtgaagagc tgggactcaa gtgcagtcca
1140
cgggtgtgaaa catgagggag gtgaggtgtc cgtccacttc cccataaag gtgtgcattt
1200
cagtttaggt gccccccac agagcaggct tcactgtctc tgccatccag ccccatctgg
1260
atgtgaggtg ggggtggagc atcatggggt gattgcagaa agggggagtg gcggcccacg
1320
cagcttctgc tgaggagtgc accgctctga gctgttctgt ttctgtattgc tgctctgtgt
1380
ctgcatgtat tgtgaccgtg cggtccacc tcttcagct gctgtacag ctgaggcctg
1440
gatcccggcc ttccctgtg acttacgtgt ctgtcacgg caggcagccc taaaaatcct
1500
ggtgacctgc tctcccaaga acagagcctg tcccagatg tcccagtagc gatgagtaac
1560
agaggtggct gtggaacttc tctacttctc cttgctggat cagggccttc ctgcctccc
1620
ctgggcaggt ctggccttgc tctcttggca gggccccagc cctctgacc actctgcagc
1680
tcacatgca gctgatgcca aagttgtggt gtccagtgtg cagcagcctt gggagccact
1740

gccaccttca gaggggttcc ttgctgagac ccacattgct tcacctggcc ccacctggc
 1800
 tgcttgcttg gcccaacctg gcgttctgtg ccatgctaga gcttgagctg ttgctcttct
 1860
 tcaggggagg aaataggggtg gagagcggga aggggtcttg tcctaagtgt tgctgctgtg
 1920
 gcttttttgc cttctccaaa gacgcactgc cagggtcccaa gcttcagact gctgtgctta
 1980
 gtaagcaagt gagaagcctg gggtttggag cccacctact ctctggcagc atcagcatcc
 2040
 tactcctggc aacatcaggc caacgtccac cccagcctca cattgccaga tgttggcaga
 2100
 agggctaata ttgaccgtct tgactggctg gaggcttcaa agccactggg atgtcctcca
 2160
 ggcacctggg tcccatgacc agctccccgt ctccataggg gtaggcattt cactgggtta
 2220
 tgaagctcga gtttcattaa atatgttaag aatcaaagct gtctttgttc aggtgctat
 2280
 aacaaaaata taatagcctg ggtggcttaa ac
 2312

<210> 6284

<211> 122

<212> PRT

<213> Homo sapiens

<400> 6284

His	Ser	Arg	Val	Cys	Pro	Pro	Phe	Cys	Pro	Gln	Trp	Phe	Leu	Gly	Phe
1				5					10					15	
Ala	Val	Phe	Leu	Leu	Pro	Trp	Ala	Ser	Met	Trp	Leu	Arg	Ser	Leu	Leu
			20					25					30		
Lys	Pro	Ile	His	Val	Phe	Phe	Gly	Ala	Ala	Ile	Leu	Ser	Leu	Ser	Ile
		35					40					45			
Ala	Ser	Val	Ile	Ser	Gly	Ile	Asn	Glu	Lys	Leu	Phe	Phe	Ser	Leu	Lys
		50				55				60					
Asn	Thr	Thr	Arg	Pro	Tyr	His	Ser	Leu	Pro	Ser	Glu	Ala	Val	Phe	Ala
65					70					75				80	
Asn	Ser	Thr	Gly	Met	Leu	Val	Val	Ala	Phe	Gly	Leu	Leu	Val	Leu	Tyr
			85						90				95		
Ile	Leu	Leu	Ala	Ser	Ser	Trp	Lys	Arg	Pro	Glu	Pro	Gly	Ile	Leu	Thr
			100				105						110		
Asp	Arg	Gln	Pro	Leu	Leu	His	Asp	Gly	Glu						
			115				120								

<210> 6285

<211> 2542

<212> DNA

<213> Homo sapiens

<400> 6285

nttttttttt ttttttctgt ttatgacact ttattgatgc tgggggggtg gggaggagac
 60
 ctggagaaat atgtgggggc aagagtcccc aggtggggac agggaaagtg ttgaagcctg
 120

gccactactg ggcaggggaag acagagttgc cactgtatgc acaggggatg agcagctgcc
180
ggtactccag gggcaggtgc cgctccacta gcacgtgcag tgagacttgg tcagtgaacca
240
ggccctgccc cgcacacagc agctccaggt cctctggcct cacagtcttg cggccagcat
300
gagcagcaaa tacctccaga tcatcacaaa gatgctggaa atatttatct aggcacttct
360
ccaccatctc aagagccttc ctctccatgg gcactcttggc atagaagcta aagagtttca
420
catagtgttc agtcagcctc tgtggggatc ttgccggggc ctggggccgg tggtcggggc
480
ctagggggat gcctgaccaa cagaggctct gcaggctctg aagataagac tgcagcacca
540
ggcgctgggg ctggctcaag aaactgatga tgcgcctgg cctggagaga ctcaggggtg
600
ctggaggccc actctggact tgcctgcctg ccagaggcat cctcatcccc tgaagatgct
660
cctggcccgt cagcctcagc agtcccctgg gatccctctg cttctgtcac ctctgtgtgt
720
ccctcagcct cttctacct gctgggtcct tgtgtcctg ttgcctccat ttcactcaca
780
ctcacacctt cttcttccat ctttttctct gcctcttcaa ctccatcgtg taagggtctt
840
acttcatctt ctccagagac accactgtgt gtgtcagga agcccagagc aaaggcattg
900
acctctctct cctctctctg cagaaactgg gctggtttcc cagggcctga gtgaagggga
960
gagaatacag gccggagacg cagcaggcca aggtgcata gctcagagaa gggtaaagat
1020
ggactctgct cttggatgaa ggaggcagcc acagccaggg tgctctaggg gcacagaggg
1080
gcttgaggaa ggaaaactac cattgtcaac tctacccaa gctaaatttg gctccaggcc
1140
accagtgcc cactactact attcttctgc agccaggcc cactgctctg tgtcttgcca
1200
ccggcagcct gctcagcgtc ttcagcccca gtgtgaggcg tgcagggcag ggagtgatac
1260
acgttggggg agccaacctt gggctgagag aacggctggg tgcctccaa cacaatgttg
1320
gaggagacca gggaagtatc tcgcagatcc cgcaaaaagg caccacgctc tacagctcgg
1380
cgggctggag gtctgcgggc caagccaggc ctctgcactg actgtggctg aagagggtg
1440
gcaaaggtca ggttgaggga tctggtgagg gaagaggcat cagcattccc ttgaggctct
1500
tgggagagag acagcccctg gtccactccc tgctgaaaca ctgacagtct cagcctctgt
1560
ttcctctctc caggggccag cagacctgga gccaggggtg tggggggctc gagctcagga
1620
agttgcagct ccaggctgcc gcaactgctc tcttgtctgg agggttggac cgctgcgggt
1680
gctggcactg gcttactac cgactcaggc atcaggatgg aagattctgg ggcagttagt
1740

aggatgttct tcagcagcgt ccgaggtgtc tgttctcca agtgcccact ggcctgaata
 1800
 tgggcccgatc tgccaacaga cctggetcca tgggaacgcc ctctggctat cgtccttgtt
 1860
 tggccactca acttctctggg ggaagccgtt tcaagcaggg ctctccgggc tccagcccga
 1920
 gcactccggg gtcgccgcgg ggtgcgcggg tccgctgtat ccagcacgcg tcgcagcagc
 1980
 gtgcgcggcg tggagtcgct gtcagggttg tggtcagcca tcgtctcggc cccggggcct
 2040
 cctaaccgcc cagccagctg caggctccgc cttcccgccg ccacagttaa tgtaactctc
 2100
 gcgatgtccc cgcacagccc caggggaatt gtagttctcg cactatcgca gtcgcggggg
 2160
 tggacagtga tggttgcaaa ctccggatgc tttggaggca gcctcgctgc gggtaaacct
 2220
 cggttaatgt aatgcaagca gcccaagtct tggtctcttc atcatattct gttagtgttt
 2280
 tcctccgtat ttttactggt ttgacaatcc tctcacctta agttttcatg gcaactgaat
 2340
 tagaacttgg tttctgagtc ttccgtggag ttcagtttcc cagaatctat aattccatct
 2400
 attcgggaaa gtgaggcagg agcattgctt gatccttggg aggcagaggt tgcatatctg
 2460
 agatcgagcc acaatactcc atcttgggcg gttaagaggg ccccgttccc agcctatgcc
 2520
 ttcccacttc cctgttcaaa ta
 2542

<210> 6286
 <211> 57
 <212> PRT
 <213> Homo sapiens

<400> 6286
 Pro Gly Pro Ala Ala Ala Ser Ala Ala Pro Gly Pro Leu Ala Ser Gln
 1 5 10 15
 Ser Cys Gly Gln His Glu Gln Gln Ile Pro Pro Asp His His Lys Asp
 20 25 30
 Ala Gly Asn Ile Tyr Leu Gly Thr Ser Pro Pro Ser Gln Glu Pro Ser
 35 40 45
 Ser Pro Trp Ala Ser Trp His Arg Ser
 50 55

<210> 6287
 <211> 1674
 <212> DNA
 <213> Homo sapiens

<400> 6287
 ntccgcatcc gcgcgcggcg ggagcgggag gaggaggcat cgtccccggg gctgggctgc
 60
 agcaagccgc acctggagaa gctgacctg ggcacacgc gcacccatga atcttcccca
 120

gggtgtgactg aggtgaccat catagaaaag cctcctgctg aacgtcatat gatttcttcc
180
tgggaacaaa agaataactg tgtgatgcct gaagatgtga agaactttta cctgatgacc
240
aatggcttcc acatgacatg gagtgtgaag ctggatgagc acatcattcc actgggaagc
300
atggcaatta acagcatctc aaaactgact cagctcacc cgtcttccat gtattcactt
360
cctaatagcac ccactctggc agacctggag gacgatacac atgaagccag tgatgatcag
420
ccagagaagc ctcactttga ctctcgcagt gtgatatttg agctggattc atgcaatggc
480
agtgggaaaag tttgccttgt ctacaaaagt gggaaaccag cattagcaga agacactgag
540
atctgggttcc tggacagagc gttatactgg cattttctca cagacacctt tactgectat
600
taccgcctgc tcatcaccca cctgggcctg cccagtggc aatatgcctt caccagctat
660
ggcattagcc cacaggccaa gcaatgggtc agcatgtata aacctatcac ctacaacaca
720
aacctgctca cagaagagac cgactccttt gtgaataagc tagatcccag caaagtgttt
780
aagagcaaga acaagatcgt aatcccaaaa aagaaagggc ctgtgcagcc tgcagggtggc
840
cagaaagggc cctcaggacc ctccggtccc tccacttcc cactttctaa atcctcctct
900
ggctctggaa accccacccg gaagtgcga cccctccctc caactcccta ccagctccag
960
agtgggtggt tccatgcaca gatggcccta ggggtgacct ccagttttgc gtgtggaccg
1020
taggcctctt tctagttaa tgacaaaat tgtaaggctt ttagtccac cgacattagc
1080
caggctcgta gtgaggctc cagagcaggc tgtgctgtcc cctgcctctg gaagcaatgg
1140
ggaatttga atcttgtgta agtgcccaaa taagtctgag tgctttctc ttcttcaaca
1200
ctcaaccctc aatcccttag cactgattga ttagagaggc ccccaaaaga aaccactggc
1260
tttgacccat gaagcattag aactgcattg ttcattcagg agccactagt cacatatgac
1320
tatttaaatt taaagtaaat tgtatgaaaa attcatttct tcaattgcat tagccacatt
1380
ttgagtattc atgtggctgg tagattctgt attagcaca agatatggaa catttccatc
1440
accacagaaa gttctgttgg acagcactgc attagaatat ttctactg ctcttccctc
1500
attaattttt gttgttaatg ttgatgtctt cattggatgg gtcataatgt tccatgaaac
1560
ctctcaagta cacaattgta tgttctttgt atcccttacc acaaatatct cgctctgctc
1620
atttcttttg cagcttccca taaagtttgt ctctctcatc aaaaaaaaaa aaaa
1674

<210> 6288

<211> 269
 <212> PRT
 <213> Homo sapiens

<400> 6288
 Pro Gly Val Thr Glu Val Thr Ile Ile Glu Lys Pro Pro Ala Glu Arg
 1 5 10 15
 His Met Ile Ser Ser Trp Glu Gln Lys Asn Asn Cys Val Met Pro Glu
 20 25 30
 Asp Val Lys Asn Phe Tyr Leu Met Thr Asn Gly Phe His Met Thr Trp
 35 40 45
 Ser Val Lys Leu Asp Glu His Ile Ile Pro Leu Gly Ser Met Ala Ile
 50 55 60
 Asn Ser Ile Ser Lys Leu Thr Gln Leu Thr Gln Ser Ser Met Tyr Ser
 65 70 75 80
 Leu Pro Asn Ala Pro Thr Leu Ala Asp Leu Glu Asp Asp Thr His Glu
 85 90 95
 Ala Ser Asp Asp Gln Pro Glu Lys Pro His Phe Asp Ser Arg Ser Val
 100 105 110
 Ile Phe Glu Leu Asp Ser Cys Asn Gly Ser Gly Lys Val Cys Leu Val
 115 120 125
 Tyr Lys Ser Gly Lys Pro Ala Leu Ala Glu Asp Thr Glu Ile Trp Phe
 130 135 140
 Leu Asp Arg Ala Leu Tyr Trp His Phe Leu Thr Asp Thr Phe Thr Ala
 145 150 155 160
 Tyr Tyr Arg Leu Leu Ile Thr His Leu Gly Leu Pro Gln Trp Gln Tyr
 165 170 175
 Ala Phe Thr Ser Tyr Gly Ile Ser Pro Gln Ala Lys Gln Trp Phe Ser
 180 185 190
 Met Tyr Lys Pro Ile Thr Tyr Asn Thr Asn Leu Leu Thr Glu Glu Thr
 195 200 205
 Asp Ser Phe Val Asn Lys Leu Asp Pro Ser Lys Val Phe Lys Ser Lys
 210 215 220
 Asn Lys Ile Val Ile Pro Lys Lys Lys Gly Pro Val Gln Pro Ala Gly
 225 230 235 240
 Gly Gln Lys Gly Pro Ser Gly Pro Ser Gly Pro Ser Thr Ser Ser Thr
 245 250 255
 Ser Lys Ser Ser Ser Gly Ser Gly Asn Pro Thr Arg Lys
 260 265

<210> 6289
 <211> 1321
 <212> DNA
 <213> Homo sapiens

<400> 6289
 acactgcgtc cggggccaga cgacgatatc agcgcgggggt cccacacaacg ccatgggggca
 60
 gagccaactc tcgagcgcgt gatcgaagcc cgcagttttt tcgcccccg t cacttcggg
 120
 tgcgacaatc tcttctgtcc ggccagccgc tggagtcgtt aggtgccgcc ttgcttctga
 180
 cgagccacac gtttgcttct tcctgtgttt ccagctgga gggacatgag tgctcctggg
 240

ccgtcgtctc cggacggggc cctgacacgg ccaccctact gcttgagggc cggggagccg
 300
 acgcctgggt taagtgcacac ttctccagat gaagggttaa tagaggactt gactatagaa
 360
 gacaaagcag tggagcaact ggcagaagga ttgctttctc attatttgcc agatctgcag
 420
 agatcaaaac aagcctcca ggaactcaca cagaaccaag ttgtattggt agacacactg
 480
 gaacaagaga ttcaaaatt taaagaatgt cattctatgt tggatattaa tgctttgttt
 540
 gctgaggcta aacactatca tgccaagttg gtgaatataa gaaaagagat gctgatgctt
 600
 catgaaaaaa catcaaggtt aaaaaaaga gcacttaaac tgcagcagaa gagggcaaaa
 660
 gaagagttgg aaaggagca gcaacgagag aaggggtttg aaagagaaaa gcagttaact
 720
 gccagaccag ccaaaaggat gtgaaaagtt gtgtttgtgt gttttcttct cctgtcccat
 780
 atttgggtta tgatgactca agtgtagact gaagttgagg tagtgcctta tgccattatg
 840
 tcatatgttg aaatccttat tccggtatta ctgtgtctcc atgccttttt tccaagtagc
 900
 agacgtcatg ttgcatgggt ttgatattt atatgtaagt ttttcaaatt ttgcttaatt
 960
 ttaaaattta ttattttgat cttgaattat ttataaactg gaaagtgggt tgattattgt
 1020
 gagtcaaaac tctaagtggt taaaaattag tatgaatttt ttagcttctt aatgaatatg
 1080
 gatttaaaac tctccagttc ttattttatg aaatgacttg cctttctggt aatacaatgc
 1140
 tgatttttta gtaattgcct ttctattact ttgttaagaa gaaatgccag ctgtttaatc
 1200
 acacctacc ctggaaaaga ggtaaacctt ttgaacagtt gaatttcac agaagctcta
 1260
 tagctttttg gtgagaggaa gtgatactct ttattacaag aaacaaggaa ttaacaaaaa
 1320
 t
 1321

<210> 6290

<211> 172

<212> PRT

<213> Homo sapiens

<400> 6290

Met	Ser	Val	Pro	Gly	Pro	Ser	Ser	Pro	Asp	Gly	Ala	Leu	Thr	Arg	Pro
1				5				10						15	
Pro	Tyr	Cys	Leu	Glu	Ala	Gly	Glu	Pro	Thr	Pro	Gly	Leu	Ser	Asp	Thr
			20					25					30		
Ser	Pro	Asp	Glu	Gly	Leu	Ile	Glu	Asp	Leu	Thr	Ile	Glu	Asp	Lys	Ala
			35				40					45			
Val	Glu	Gln	Leu	Ala	Glu	Gly	Leu	Leu	Ser	His	Tyr	Leu	Pro	Asp	Leu
			50				55				60				
Gln	Arg	Ser	Lys	Gln	Ala	Leu	Gln	Glu	Leu	Thr	Gln	Asn	Gln	Val	Val

65		70		75		80									
Leu	Leu	Asp	Thr	Leu	Glu	Gln	Glu	Ile	Ser	Lys	Phe	Lys	Glu	Cys	His
				85					90					95	
Ser	Met	Leu	Asp	Ile	Asn	Ala	Leu	Phe	Ala	Glu	Ala	Lys	His	Tyr	His
			100					105					110		
Ala	Lys	Leu	Val	Asn	Ile	Arg	Lys	Glu	Met	Leu	Met	Leu	His	Glu	Lys
		115				120					125				
Thr	Ser	Lys	Leu	Lys	Lys	Arg	Ala	Leu	Lys	Leu	Gln	Gln	Lys	Arg	Gln
	130				135					140					
Lys	Glu	Glu	Leu	Glu	Arg	Glu	Gln	Gln	Arg	Glu	Lys	Gly	Phe	Glu	Arg
145				150					155					160	
Glu	Lys	Gln	Leu	Thr	Ala	Arg	Pro	Ala	Lys	Arg	Met				
		165						170							

<210> 6291

<211> 2718

<212> DNA

<213> Homo sapiens

<400> 6291

naggttggtct tggcgsgggg cgtggcacct gcactgttcc gggggatgcc agctcacttc
 60
 tcggacagcg ccagactga ggcctgtctac cacatgtctga gccggcccca gccgccacca
 120
 gacccccctcc tgtctccagcg tctgccacgg ccagctccc tgtcagacaa gaccagctc
 180
 cacagcaggt ggctggactc gtcgcggtgt ctcctgcagc agggcatcaa ggctggggac
 240
 gcactctggc tgcgcttcaa gtactacagc ttcttcgatt tggatcccaa gacagacccc
 300
 gtgcggctga cacagctgta tgagcaggcc cgggtgggacc tgctgctgga ggagattgac
 360
 tgcaccgagg aggagatgat ggtgtttgcc gccctgcagt accacatcaa caagctgtcc
 420
 cagagcgsgg aggtggggga gccggctggc acagaccag ggctggacga cctggatgtg
 480
 gccctgagca acctggaggt gaagctggag gggtcggcgc ccacagatgt gctggacagc
 540
 ctcaccacca tcccagagct caaggactat ctccgaatct ttccggcccc gaagctgacc
 600
 ctgaagggct accgccaaca ctgggtggtg ttcaaggaga ccacactgtc ctactacaag
 660
 agccaggacg aggccctgg ggacccatt cagcagctca acctcaaggg ctgtgaggtg
 720
 gttcccgatg ttaacgtctc cggccagaag ttctgcatta aactcctagt gccctcccct
 780
 gagggcatga gtgagatcta cctgcggtgc caggatgagc agcagtatgc ccgctggatg
 840
 gctggctgcc gcctggcctc caaaggccgc accatggccg acagcagcta caccagcgag
 900
 gtgcaggcca tcctggcctt cctcagcctg cagcacgggc agtggggggc caggcaacca
 960
 cccccacggc ctgatgcctc tgccgagggc ctcaaccctc acggcctcgt tgcccccg
 1020

ttccagcgaa agttcaaggc caagcagctc accccacgga tcctggaagc ccaccagaat
1080
gtggcccagt tgctgctggc agaggccag ctgcgcttca tccaggcctg gcagtccttg
1140
cccgaattcg gcatctccta tgtcatggtc aggttcaagg gcagcaggaa agacgagatc
1200
ctgggcatcg ccaacaaccg actgatccgc atcgacttgg ccgtgggtga cgtggccaag
1260
acctggcggt tcagcaacat gcgccagtgg aatgtcaact gggacatccg gcagggtggc
1320
atcgagtttg atgaacacat caatgtggcc ttcagctgtg tgtctgccag ctgccgaatt
1380
gtacacgagt atatcggggg ctacattttc ctgtcgacgc gggagcgggc ccgtggggag
1440
gagctggatg aagacctctt cctgcagctc accggggggc atgaggcctt ctgagggctg
1500
tctgattgcc cctgccctgc tcaccaccct gtcacagcca ctcccaagcc cacaccaca
1560
ggggctcact gcccacacc cgctccaggc aggcaccag ctggggcattt cacctgctgt
1620
cactgacttt gtgcaggcca aggacctggc agggccagac gctgtaccat caccagggc
1680
agggatgggg gtgggggtcc ctgagctcat gtggtgcccc ctttccttgt ctgagtggct
1740
gaggctgata ccctgacct atctgcagtc cccagcaca caaggaagac cagatgtagc
1800
tacaggatga tgaacatgg tttcaaacga gttctttctt gttacttttt aaaatttctt
1860
ttttataaat taatatttta ttgttgatc ctctctctt ctctggagct gtgcttgggg
1920
ctactctgac actctgtctc ttcacacca gcccaaggaaa ggggctttcg ggtagggcgt
1980
agctgcaggc cctccttgaa gtacttggga aggaggaagc catcagtatt ccctggagtc
2040
agaatcccc cattggcaga gcggaagaag ggtattccat ctgccagagc caggggtcca
2100
tcgatgaaca cagctatttc acaatgggac cgcctgccac tgatgatacc ggggtctcca
2160
ggcagtcctg gggccagggtg aatgtgcgtc cttccctggc aggacaggcc tttgagtagg
2220
atggatggcc agtgcttcca gaatgtacca tggactagca tcgggggcag ggctgcggtg
2280
tctccagggg catcagctcc aacttaggta cctgcaggga atggccctgg ttggcccgga
2340
tgagaaggcc agtgctggga tccccagct gcagggcgaa ccgctgcttc ctattgggtg
2400
ccaccacgcy ctgcacatct tcagcagaga agccgcggaa ctggggcaac tgcaggaggg
2460
tgcccagggg cacgaagcca tctgtgggca ggcagggtgc tcaggagcta accttgcctt
2520
ggactggggc agggtaaca gggagccaca ggcaaccgaa acaaagtctg ggcttgagga
2580
tcgcttgggc atcctctgtg ggaccttag aaagtctccc ctttctgggc cgcagttttc
2640

aacttacata aaaagaggat ctgcctcacg gaggggcagg gaggtgagtg cccagcatag

2700

cgctggcccc gagtgcac

2718

<210> 6292

<211> 497

<212> PRT

<213> Homo sapiens

<400> 6292

Xaa	Val	Val	Leu	Ala	Gly	Gly	Val	Ala	Pro	Ala	Leu	Phe	Arg	Gly	Met
1				5					10					15	
Pro	Ala	His	Phe	Ser	Asp	Ser	Ala	Gln	Thr	Glu	Ala	Cys	Tyr	His	Met
		20						25					30		
Leu	Ser	Arg	Pro	Gln	Pro	Pro	Pro	Asp	Pro	Leu	Leu	Leu	Gln	Arg	Leu
		35					40					45			
Pro	Arg	Pro	Ser	Ser	Leu	Ser	Asp	Lys	Thr	Gln	Leu	His	Ser	Arg	Trp
	50					55				60					
Leu	Asp	Ser	Ser	Arg	Cys	Leu	Met	Gln	Gln	Gly	Ile	Lys	Ala	Gly	Asp
65				70						75				80	
Ala	Leu	Trp	Leu	Arg	Phe	Lys	Tyr	Tyr	Ser	Phe	Phe	Asp	Leu	Asp	Pro
			85					90					95		
Lys	Thr	Asp	Pro	Val	Arg	Leu	Thr	Gln	Leu	Tyr	Glu	Gln	Ala	Arg	Trp
		100						105					110		
Asp	Leu	Leu	Leu	Glu	Glu	Ile	Asp	Cys	Thr	Glu	Glu	Glu	Met	Met	Val
		115					120					125			
Phe	Ala	Ala	Leu	Gln	Tyr	His	Ile	Asn	Lys	Leu	Ser	Gln	Ser	Gly	Glu
	130					135				140					
Val	Gly	Glu	Pro	Ala	Gly	Thr	Asp	Pro	Gly	Leu	Asp	Asp	Leu	Asp	Val
145					150					155				160	
Ala	Leu	Ser	Asn	Leu	Glu	Val	Lys	Leu	Glu	Gly	Ser	Ala	Pro	Thr	Asp
			165					170					175		
Val	Leu	Asp	Ser	Leu	Thr	Thr	Ile	Pro	Glu	Leu	Lys	Asp	Tyr	Leu	Arg
		180					185						190		
Ile	Phe	Arg	Pro	Arg	Lys	Leu	Thr	Leu	Lys	Gly	Tyr	Arg	Gln	His	Trp
	195					200						205			
Val	Val	Phe	Lys	Glu	Thr	Thr	Leu	Ser	Tyr	Tyr	Lys	Ser	Gln	Asp	Glu
	210					215					220				
Ala	Pro	Gly	Asp	Pro	Ile	Gln	Gln	Leu	Asn	Leu	Lys	Gly	Cys	Glu	Val
225				230						235				240	
Val	Pro	Asp	Val	Asn	Val	Ser	Gly	Gln	Lys	Phe	Cys	Ile	Lys	Leu	Leu
			245						250					255	
Val	Pro	Ser	Pro	Glu	Gly	Met	Ser	Glu	Ile	Tyr	Leu	Arg	Cys	Gln	Asp
		260						265					270		
Glu	Gln	Gln	Tyr	Ala	Arg	Trp	Met	Ala	Gly	Cys	Arg	Leu	Ala	Ser	Lys
		275					280					285			
Gly	Arg	Thr	Met	Ala	Asp	Ser	Ser	Tyr	Thr	Ser	Glu	Val	Gln	Ala	Ile
	290					295					300				
Leu	Ala	Phe	Leu	Ser	Leu	Gln	His	Gly	Gln	Trp	Gly	Pro	Arg	Gln	Pro
305					310					315				320	
Pro	Pro	Arg	Pro	Asp	Ala	Ser	Ala	Glu	Gly	Leu	Asn	Pro	Tyr	Gly	Leu
			325						330					335	
Val	Ala	Pro	Arg	Phe	Gln	Arg	Lys	Phe	Lys	Ala	Lys	Gln	Leu	Thr	Pro


```

          340          345          350
Arg Ile Leu Glu Ala His Gln Asn Val Ala Gln Leu Ser Leu Ala Glu
          355          360          365
Ala Gln Leu Arg Phe Ile Gln Ala Trp Gln Ser Leu Pro Asp Phe Gly
          370          375          380
Ile Ser Tyr Val Met Val Arg Phe Lys Gly Ser Arg Lys Asp Glu Ile
385          390          395          400
Leu Gly Ile Ala Asn Asn Arg Leu Ile Arg Ile Asp Leu Ala Val Gly
          405          410          415
Asp Val Val Lys Thr Trp Arg Phe Ser Asn Met Arg Gln Trp Asn Val
          420          425          430
Asn Trp Asp Ile Arg Gln Val Ala Ile Glu Phe Asp Glu His Ile Asn
          435          440          445
Val Ala Phe Ser Cys Val Ser Ala Ser Cys Arg Ile Val His Glu Tyr
          450          455          460
Ile Gly Gly Tyr Ile Phe Leu Ser Thr Arg Glu Arg Ala Arg Gly Glu
465          470          475          480
Glu Leu Asp Glu Asp Leu Phe Leu Gln Leu Thr Gly Gly His Glu Ala
          485          490          495
Phe

```

<210> 6293

<211> 750

<212> DNA

<213> Homo sapiens

<400> 6293

```

nggccggggcg ccatggcacc gtggggcaag cggtgggctg gcgtgcgcgg ggtgctgctt
60
gacatctcgg gcgtgctgta cgacagcggc gcgtgcgcgg gcacggccat cgccggctcg
120
gtggaggcgg tggccagact gaagcgttcc cggtgaagg tgaggttctg caccaacgag
180
tcgcagaagt cccgggcaga gctgggtggg cagcttcaga ggctgggatt tgacatctct
240
gagcaggagg taaccgcccc ggcaccagct gcctgccaga tcctgaagga gcgaggcctg
300
cgaccatacc tgctcatcca tgacggagtc cgctcagaat ttgatcagat cgacacatcc
360
aaccctaaact gtgtggtaat tgcagacgca ggagaaagct tttcttatca aaacatgaat
420
aacgccttcc aggtgctcat ggagctggaa aaacctgtgc tcatatcact gggaaaaggg
480
cgttactaca aggagacctc tggcctgatg ctggacgttg gtcctcatat gaaggcgctt
540
gagtatgcct gtggcatcaa agccgaggtg gtggggaagc cttctcctga gtttttcaag
600
tctgccctgc aagcgatagg agtgggaagc caccaggccg tcatgattgg ggacgatatc
660
gtgggcgacg tcggcgggtg ccagcgggtg ggaatgagag cgctgcaggt gcgcaccggg
720
aagttcaggc ccagtgcaga gcaccatccg
750

```

<210> 6294
 <211> 250
 <212> PRT
 <213> Homo sapiens

<400> 6294
 Xaa Pro Gly Ala Met Ala Pro Trp Gly Lys Arg Leu Ala Gly Val Arg
 1 5 10 15
 Gly Val Leu Leu Asp Ile Ser Gly Val Leu Tyr Asp Ser Gly Ala Cys
 20 25 30
 Gly Gly Thr Ala Ile Ala Gly Ser Val Glu Ala Val Ala Arg Leu Lys
 35 40 45
 Arg Ser Arg Leu Lys Val Arg Phe Cys Thr Asn Glu Ser Gln Lys Ser
 50 55 60
 Arg Ala Glu Leu Val Gly Gln Leu Gln Arg Leu Gly Phe Asp Ile Ser
 65 70 75 80
 Glu Gln Glu Val Thr Ala Pro Ala Pro Ala Cys Gln Ile Leu Lys
 85 90 95
 Glu Arg Gly Leu Arg Pro Tyr Leu Leu Ile His Asp Gly Val Arg Ser
 100 105 110
 Glu Phe Asp Gln Ile Asp Thr Ser Asn Pro Asn Cys Val Val Ile Ala
 115 120 125
 Asp Ala Gly Glu Ser Phe Ser Tyr Gln Asn Met Asn Asn Ala Phe Gln
 130 135 140
 Val Leu Met Glu Leu Glu Lys Pro Val Leu Ile Ser Leu Gly Lys Gly
 145 150 155 160
 Arg Tyr Tyr Lys Glu Thr Ser Gly Leu Met Leu Asp Val Gly Pro Tyr
 165 170 175
 Met Lys Ala Leu Glu Tyr Ala Cys Gly Ile Lys Ala Glu Val Val Gly
 180 185 190
 Lys Pro Ser Pro Glu Phe Phe Lys Ser Ala Leu Gln Ala Ile Gly Val
 195 200 205
 Glu Ala His Gln Ala Val Met Ile Gly Asp Asp Ile Val Gly Asp Val
 210 215 220
 Gly Gly Ala Gln Arg Cys Gly Met Arg Ala Leu Gln Val Arg Thr Gly
 225 230 235 240
 Lys Phe Arg Pro Ser Asp Glu His His Pro
 245 250

<210> 6295
 <211> 2091
 <212> DNA
 <213> Homo sapiens

<400> 6295
 ggccgcgggg gcgggggtgg gaggcggagg cggggccggg gcgccgcggg cgggggcggc
 60
 ggggcggggc gagtcgggag gactcctcgg actgcgcgga acatggcggt ctgggggttg
 120
 cgccgcggcg cagccctccg gctgtggggc cgggtagttg aacgggtcga ggccggggga
 180
 ggcggtgggg cgtttcaggc ctgcggctgt cggctggtgc ttggcggcag ggacgatgtg
 240

agtgcggggc tgagaggcag ccatggggcc cgcggtgagc ccttggaacc ggcgcgcccc
300
ttgcagaggc ctcccagacc cgagggtgcc agggcattcc ggaggcagcc gagggcagca
360
gctcccagtt tcttcttttc gagtattaaa ggtggaagaa ggtccatata tttttctgtg
420
ggtgcttcaa gtgttgttgg aagtggaggc agcagtgaca aggggaagct ttccctgcag
480
gatgtagctg agctgattcg ggccagagcc tgccagaggg tgggtggtcat ggtggggggc
540
ggcatcagca caccagtggt cattccagac ttcagatcgc cggggagtgg cctgtacagc
600
aacctccagc agtacgatct cccgtacccc gagggcattt ttgaactccc attcttcttt
660
cacaacccca agcccttttt cactttggcc aaggagctgt accctggaaa ctacaagccc
720
aacgtcactc actactttct ccggtgctt catgacaagg ggtgcttct gcggtcttac
780
acgcagaaca tcgatgggct tgagagagtg tcgggcatcc ctgcctcaaa gctgggtgaa
840
gctcatggaa cctttgctc tgccacctgc acagtctgcc aaagaccctt ccaggggag
900
gacattcggg ctgacgtgat ggcagacagg gttccccgct gcccggtctg caccggcggt
960
gtgaagcccg acattgtgtt ctttggggag ccgctgcccc agaggttctt gctgcatgtg
1020
gttgatttcc ccatggcaga tctgtgctc atccttggga cctccctgga ggtggagcct
1080
tttgccagct tgaccgagge cgtgcggagc tcagttcccc gactgctcat caaccgggac
1140
ttggtggggc ccttggttg gcatcctgc agcagggacg tggcccagct gggggacgtg
1200
gttcacggcg tggaaagcct agtggagctt ctgggctgga cagaagagat gcgggacctt
1260
gtgcagcggg aaactgggaa gcttgatgga ccagacaaat aggatgatgg cttgaccgag
1320
gccgtgcgga cgtcagttcc ccgactgctc atcaaccggg acttggtggg gcccttggt
1380
tggcatcctc gcagcagga cgtggcccag ctgggggacg tggttcacgg cgtggaaagc
1440
ctagtggagc ttctgggctg gacagaagag atgcgggacc ttgtgcagcg ggaaactggg
1500
aagcttgatg gaccagacaa ataggatgat ggctgcccc acacaataaa tggtaacata
1560
ggagacatcc acatcccaat tctgacaaga cctcatgcct gaagacagct tgggcaggtg
1620
aaaccagaat atgtgaactg agtggacacc cgaggctgcc actggaatgt cttctcaggc
1680
catgagctgc agtgactggt agggctgtgt ttacagtcag ggccaccccg tcacatatac
1740
aaaggagctg cctgcctggt tctgtgttg aactcttcac tctgtgaag ctctaattg
1800
aaaaagcttt cttctgactg tgacctctt gaactgaatc agaccaactg gaatcccaga
1860


```

305              310              315              320
Ser Leu Glu Val Glu Pro Phe Ala Ser Leu Thr Glu Ala Val Arg Ser
              325              330              335
Ser Val Pro Arg Leu Leu Ile Asn Arg Asp Leu Val Gly Pro Leu Ala
              340              345              350
Trp His Pro Arg Ser Arg Asp Val Ala Gln Leu Gly Asp Val Val His
              355              360              365
Gly Val Glu Ser Leu Val Glu Leu Leu Gly Trp Thr Glu Glu Met Arg
              370              375              380
Asp Leu Val Gln Arg Glu Thr Gly Lys Leu Asp Gly Pro Asp Lys
385              390              395

```

<210> 6297

<211> 472

<212> DNA

<213> Homo sapiens

<400> 6297

```

ngggggccgct ggccgagagg ctgaggcggc gtcattgtcct ccgaggtgtc cgcgcgcccgc
60
gacgccaaga agctggtgcg ctccccgagc ggctgcgca tggtgcccga acaccgcgccc
120
ttcggaagcc cgcttcggcct ggaggagccg cagtgggtcc cggacaagga gtgtcggaga
180
tgtatgcagt gtgacgcaa gtttgacttt ctcaccagaa agcaccactg tcgccgctgc
240
gggaagtgtc tctgcgacag gtgctgcagc cagaaggtgc cgctgcggcg catgtgcttt
300
gtggaccccg tgcggcagtg cgcggagtg gccttggtgt ccctcaagga ggccgagttc
360
tacgacaagc agctcaaagt gctcctgagc ggtaaggacg ggtgtcctgc acagtctctgc
420
gcgctccgcc agccggctcc tcgtgtctgt ggcatgctg tgggctgtgc ac
472

```

<210> 6298

<211> 146

<212> PRT

<213> Homo sapiens

<400> 6298

```

Met Ser Ser Glu Val Ser Ala Arg Arg Asp Ala Lys Lys Leu Val Arg
1          5          10          15
Ser Pro Ser Gly Leu Arg Met Val Pro Glu His Arg Ala Phe Gly Ser
20         25         30
Pro Phe Gly Leu Glu Glu Pro Gln Trp Val Pro Asp Lys Glu Cys Arg
35         40         45
Arg Cys Met Gln Cys Asp Ala Lys Phe Asp Phe Leu Thr Arg Lys His
50         55         60
His Cys Arg Arg Cys Gly Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln
65         70         75         80
Lys Val Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys
85         90         95
Ala Glu Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys

```

100 105 110
 Gln Leu Lys Val Leu Leu Ser Gly Lys Asp Gly Cys Pro Ala Gln Ser
 115 120 125
 Cys Ala Leu Arg Gln Pro Ala Pro Arg Val Cys Gly Asp Ala Val Gly
 130 135 140
 Cys Ala
 145

<210> 6299

<211> 1466

<212> DNA

<213> Homo sapiens

<400> 6299

ctgattccgg gctgtcatgg cgacccccaa caatctgacc cccaccaact gcagctgggtg
 60
 gcccatctcc gcgctggaga gcgatgcggc caagccagcg gaggcccccg acgctcccg
 120
 ggccggccagc ccgcccattg gccccaggag agcctggttc tgtaccactg gaccagtc
 180
 ttcagctcgc agaaggtgcg gctggtgatc gccgagaagg gcctggtgtg cgaggagcgg
 240
 gacgtgagcc tgccacagag cgagcacaaag gagccctggt tcatgcggct caacctgggc
 300
 gaggaggtgc ccgtcatcat ccaccgcgac aacatcatca gtgactatga ccagatcatt
 360
 gactatgtgg agcgcacctt cacaggagag cacgtggtgg ccctgatgcc cgagggtggc
 420
 agcctgcagc acgcacgggt gctgcagtac cgggagctgc tggacgcact gcccatggat
 480
 gcctacacgc atggctgcat cctgcatccc gagctacca ccgactccat gatccccaa
 540
 tacgccacgg ccgagatccg cagacattta gccaatgcc cccagcacct catgaaactg
 600
 gaccatgaag aggagcccca gctctccgag ccctaccttt ctaaacaaaa gaagctcatg
 660
 gccaaagatct tggagcatga tgatgtgagc tacctgaaga agatcctcgg ggaactggcc
 720
 atggtgctgg accagattga ggccggagctg gagaagagga agctggagaa cgaggggcag
 780
 aaatgcgagc tgtggctctg tggctgtgcc ttcaccctcg ctgatgtcct cctgggagcc
 840
 accctgcacc gcctcaagtt cctgggactg tccaagaaat actgggaaga tggcagccgg
 900
 cccaacctgc agtccttctt tgagagggtc cagagacget ttgccttcg gaaagtctg
 960
 ggtgacatcc acaccacct gctgtcggcc gtcacccca atgctttccg gctgggtcaag
 1020
 aggaaacccc catecttctt cggggcgctc ttcctcatgg gctccctggg tgggatggg
 1080
 tactttgcct actggtacct caagaaaaaa tacatctagg gccaggcctg gggcttgggtg
 1140
 tctgactgac ggtgtctctg tgctgtgtga ttccccgtga gctctcagta actcactgtc
 1200

tcataaacac ttggacagcc ctccccgcc ttcgttctga gtaataatac cgtcagtg
 1260
 aaaacattcc gtagtttaga agtagacgtt gcaaagtctg tgactcaagg ccacggctct
 1320
 gctaaaagag agagaaggaa cgagagagag agagaaaaa caaaaaacca gaaaaccacg
 1380
 aatgcctttt tctatcgatt tcaaggtctc aagatgggaa ctgtgggaga ctgggtagg
 1440
 atctgagggg aactctttca cagggg
 1466

<210> 6300

<211> 372

<212> PRT

<213> Homo sapiens

<400> 6300

Leu	Ile	Pro	Gly	Cys	His	Gly	Asp	Pro	Gln	Gln	Ser	Asp	Pro	His	Gln
1				5					10					15	
Leu	Gln	Leu	Val	Ala	His	Leu	Arg	Ala	Gly	Glu	Arg	Cys	Gly	Gln	Ala
			20					25					30		
Ser	Gly	Gly	Pro	Arg	Arg	Ser	Arg	Gly	Gly	Gln	Pro	Ala	His	Trp	Pro
		35					40					45			
Arg	Glu	Ser	Leu	Val	Leu	Tyr	His	Trp	Thr	Gln	Ser	Phe	Ser	Ser	Gln
	50					55				60					
Lys	Val	Arg	Leu	Val	Ile	Ala	Glu	Lys	Gly	Leu	Val	Cys	Glu	Glu	Arg
65				70						75				80	
Asp	Val	Ser	Leu	Pro	Gln	Ser	Glu	His	Lys	Glu	Pro	Trp	Phe	Met	Arg
			85					90						95	
Leu	Asn	Leu	Gly	Glu	Glu	Val	Pro	Val	Ile	Ile	His	Arg	Asp	Asn	Ile
			100					105					110		
Ile	Ser	Asp	Tyr	Asp	Gln	Ile	Ile	Asp	Tyr	Val	Glu	Arg	Thr	Phe	Thr
		115					120					125			
Gly	Glu	His	Val	Val	Ala	Leu	Met	Pro	Glu	Val	Gly	Ser	Leu	Gln	His
	130					135					140				
Ala	Arg	Val	Leu	Gln	Tyr	Arg	Glu	Leu	Leu	Asp	Ala	Leu	Pro	Met	Asp
145				150						155				160	
Ala	Tyr	Thr	His	Gly	Cys	Ile	Leu	His	Pro	Glu	Leu	Thr	Thr	Asp	Ser
			165					170					175		
Met	Ile	Pro	Lys	Tyr	Ala	Thr	Ala	Glu	Ile	Arg	Arg	His	Leu	Ala	Asn
		180					185						190		
Ala	Thr	Thr	Asp	Leu	Met	Lys	Leu	Asp	His	Glu	Glu	Glu	Pro	Gln	Leu
	195					200					205				
Ser	Glu	Pro	Tyr	Leu	Ser	Lys	Gln	Lys	Lys	Leu	Met	Ala	Lys	Ile	Leu
	210					215					220				
Glu	His	Asp	Asp	Val	Ser	Tyr	Leu	Lys	Lys	Ile	Leu	Gly	Glu	Leu	Ala
225				230						235				240	
Met	Val	Leu	Asp	Gln	Ile	Glu	Ala	Glu	Leu	Glu	Lys	Arg	Lys	Leu	Glu
			245					250						255	
Asn	Glu	Gly	Gln	Lys	Cys	Glu	Leu	Trp	Leu	Cys	Gly	Cys	Ala	Phe	Thr
	260						265						270		
Leu	Ala	Asp	Val	Leu	Leu	Gly	Ala	Thr	Leu	His	Arg	Leu	Lys	Phe	Leu
	275					280					285				
Gly	Leu	Ser	Lys	Lys	Tyr	Trp	Glu	Asp	Gly	Ser	Arg	Pro	Asn	Leu	Gln

```

      290              295              300
Ser Phe Phe Glu Arg Val Gln Arg Arg Phe Ala Phe Arg Lys Val Leu
305              310              315              320
Gly Asp Ile His Thr Thr Leu Leu Ser Ala Val Ile Pro Asn Ala Phe
      325              330              335
Arg Leu Val Lys Arg Lys Pro Pro Ser Phe Phe Gly Ala Ser Phe Leu
      340              345              350
Met Gly Ser Leu Gly Gly Met Gly Tyr Phe Ala Tyr Trp Tyr Leu Lys
      355              360              365
Lys Lys Tyr Ile
      370

```

<210> 6301
 <211> 911
 <212> DNA
 <213> Homo sapiens

```

<400> 6301
nnacgggttt tagaaaaaca agaattacag cagccaacct atgttgccct gagttacata
60
aatagattca tgacagatgc tgcccgccga gagcaggagt ccctaaagaa gaagattcag
120
ccgaagctct cgctgactct gtccagctca gtgtctcgag ggaatgtgtc cactccccc
180
cgccacagca gtggaagcct tactcccccc gtgacccccc ccataccccc ctctcttca
240
ttccgcagca gcactccgac aggcagcgag tatgacgagg aggagggtgga ctatgaggag
300
tcggacagcg atgagtcttg gaccacagag agtgccatca gctccgaagc catcctcagc
360
tccatgtgca tgaatggagg ggaagagaag ccttttgccct gccagttcc tggatgtaaa
420
aagagatata agaatgtgaa tggcataaag tatcacgcta agaatggtca cagaacacag
480
attcgtgtcc gcaaaccatt caagtgtcgc tgtgggaaga gttacaagac agctcagggc
540
ctgcggcacc acacaatcaa ttccatccc ccggtgtcgg ctgagattat caggaagatg
600
cagcaataac atgctggtca taactgtgcc aagaaatcct caccagcagt tgetgatttt
660
gaaaacagcc accttttttc aggggaagca ttcagcaacc cttaaagaa aaagaattaa
720
atgcatgctt taaatttttt ctgtaatttt ggaatgatgt atctttgtag agttaatgat
780
tttgtacatt tgcacatgta atcatcatc ccattttcat tactttgata taagggtgcta
840
aacaaaaaaa gctctagggt cttcagcaca tttcccccaa aacaaaataa aattgagggc
900
atgttgcaaa a
911

```

<210> 6302
 <211> 202
 <212> PRT

<213> Homo sapiens

<400> 6302

Xaa Arg Val Leu Glu Lys Gln Glu Leu Gln Gln Pro Thr Tyr Val Ala
 1 5 10 15
 Leu Ser Tyr Ile Asn Arg Phe Met Thr Asp Ala Ala Arg Arg Glu Gln
 20 25 30
 Glu Ser Leu Lys Lys Lys Ile Gln Pro Lys Leu Ser Leu Thr Leu Ser
 35 40 45
 Ser Ser Val Ser Arg Gly Asn Val Ser Thr Pro Pro Arg His Ser Ser
 50 55 60
 Gly Ser Leu Thr Pro Pro Val Thr Pro Pro Ile Thr Pro Ser Ser Ser
 65 70 75 80
 Phe Arg Ser Ser Thr Pro Thr Gly Ser Glu Tyr Asp Glu Glu Glu Val
 85 90 95
 Asp Tyr Glu Glu Ser Asp Ser Asp Glu Ser Trp Thr Thr Glu Ser Ala
 100 105 110
 Ile Ser Ser Glu Ala Ile Leu Ser Ser Met Cys Met Asn Gly Gly Glu
 115 120 125
 Glu Lys Pro Phe Ala Cys Pro Val Pro Gly Cys Lys Lys Arg Tyr Lys
 130 135 140
 Asn Val Asn Gly Ile Lys Tyr His Ala Lys Asn Gly His Arg Thr Gln
 145 150 155 160
 Ile Arg Val Arg Lys Pro Phe Lys Cys Arg Cys Gly Lys Ser Tyr Lys
 165 170 175
 Thr Ala Gln Gly Leu Arg His His Thr Ile Asn Phe His Pro Pro Val
 180 185 190
 Ser Ala Glu Ile Ile Arg Lys Met Gln Gln
 195 200

<210> 6303

<211> 676

<212> DNA

<213> Homo sapiens

<400> 6303

aaagttcatg ttgttgatct aaaggcagaa tctgtagctg ctectataac tgttcgtgct
 60
 tacttaaatc agacagttac agaattcaaa caactgattt caaaggccat ccatttacct
 120
 gctgaaacaa tgagaatagt gctggaacgc tgctacaatg atttgcgtct tctcagtgct
 180
 tccagtaaaa ccctgaaagc tgaaggattt tttagaagta acaagggtgtt tgttgaaagc
 240
 tccgagactt tggattacca gatggccttt gcagactctc atttatggaa actcctggat
 300
 cggcatgcaa atacaatcag attatttggt ttgctacctg aacaatcccc agtatcttat
 360
 tccaaaagga cagcatacca gaaagctgga ggcgattctg gtaatgtgga tgatgactgt
 420
 gaaagagtca aaggacctgt aggaagccta aagtctgtgg aagctattct agaagaaagc
 480
 actgaaaaac tcaaaagctt gtcactgcag caacagcagg atggagataa tggggacagc
 540

agcaaaagta ctgagacaag tgactttgaa aacatcgaat cacctctcaa tgagagggac
 600
 tcttcagcat cagtggataa tagagaactt gaacagcata ttcagacttc tgatccagaa
 660
 aaattttcag tctgaa
 676

<210> 6304
 <211> 181
 <212> PRT
 <213> Homo sapiens

<400> 6304
 Met Arg Ile Val Leu Glu Arg Cys Tyr Asn Asp Leu Arg Leu Leu Ser
 1 5 10 15
 Val Ser Ser Lys Thr Leu Lys Ala Glu Gly Phe Phe Arg Ser Asn Lys
 20 25 30
 Val Phe Val Glu Ser Ser Glu Thr Leu Asp Tyr Gln Met Ala Phe Ala
 35 40 45
 Asp Ser His Leu Trp Lys Leu Leu Asp Arg His Ala Asn Thr Ile Arg
 50 55 60
 Leu Phe Val Leu Leu Pro Glu Gln Ser Pro Val Ser Tyr Ser Lys Arg
 65 70 75 80
 Thr Ala Tyr Gln Lys Ala Gly Gly Asp Ser Gly Asn Val Asp Asp Asp
 85 90 95
 Cys Glu Arg Val Lys Gly Pro Val Gly Ser Leu Lys Ser Val Glu Ala
 100 105 110
 Ile Leu Glu Glu Ser Thr Glu Lys Leu Lys Ser Leu Ser Leu Gln Gln
 115 120 125
 Gln Gln Asp Gly Asp Asn Gly Asp Ser Ser Lys Ser Thr Glu Thr Ser
 130 135 140
 Asp Phe Glu Asn Ile Glu Ser Pro Leu Asn Glu Arg Asp Ser Ser Ala
 145 150 155 160
 Ser Val Asp Asn Arg Glu Leu Glu Gln His Ile Gln Thr Ser Asp Pro
 165 170 175
 Glu Lys Phe Ser Val
 180

<210> 6305
 <211> 3853
 <212> DNA
 <213> Homo sapiens

<400> 6305
 cagtgccagg ctggaggcgg cagcgggttg aggcttcgcc cggttttgca gcggggactt
 60
 cggcggcggc gcctcaggca cctcggcccg gacacgatga ggcgagtggc ccggcagagc
 120
 aaattccggc atgtgttcgg gcagccggtc aagaacgacc agtgctatga ggacattcgc
 180
 gtgtcccggtg ttacctggga cagcaccttc tgcgcgtca accccaagtt cctggcggtg
 240
 attgtggagg ccagtggagg ggggtgcctt ctggtgctcc ccctaagcaa gacgggcccgc
 300

attgacaagg cctaccctac agtatgtggg cacacaggac cagtgtctgga catcgactgg
360
tgccacata acgatcaggt cattgccagc gggttcagagg actgcacggt catggtatgg
420
cagatcccag aaaatggact cacctccccg ctgacagagc cgggtggtggt actggagggg
480
cacaccaagc gagtgggcat catcgcttgg caccacacgg cccgaaacgt gctgtcagc
540
gcaggctgcg acaacgtggt actcatcttg aatgtgggca cagcggagga gctgtaccgc
600
ctggacagcc tgcacctga cctcatctac aatgtcagct ggaaccacaa tggcagcctg
660
ttttgctcag catgcaagga caagagcgtg cgcacatcgc acccccgtcg gggcacccctg
720
gtggcagagc gggagaaggc tcatgagggg gcccggccca tgcgggccat cttcctggca
780
gatggcaagg tgttcaccac aggcttcagc cgaatgagcg agcggcagct ggcgctctgg
840
aatccgaaaa atatgcagga accaattgct cttcatgaga tggacactag caatgggggtg
900
ttgtgcctt tctatgacct tgacaccagc atcatttact tatgtggaaa gggtgacagc
960
agtattcgct attttgagat cagggatgaa tccccgtacg tccactacct caacacattc
1020
agcagcaagg agcctcagag agggatgggt tacatgcccc agaggggact tgatgttaac
1080
aaatgtgaga ttgccagatt cttcaaacct catgagagaa agtgtgaacc tattattatg
1140
actgttccca ggaagtctga ctttttccaa gatgacctgt atcctgacac agcggggcca
1200
gaggccgcgc tggaggcaga agagtgggtc gaaggcaaga atgcagaccc aatcctcatc
1260
tccttgaagc acgggtacat tccaggcaaa aacagggatc tcaaggtggt caagaagaac
1320
attctggata gcaagccac tgcaaaacag aagtgcgacc tgatcagcat cccaagaaa
1380
accacagaca cggccagtgt gcaaaatgaa gccaagttgg atgagathtt aaaagagatc
1440
aaatctataa aagacacaat ctgcaatcaa gatgagcgta tttccaagtt agaacagcag
1500
atggcaaaga tagcagcctg aaggtccac cccaccct acagaaaaaa tgggagcaag
1560
aacttgctgct tgggagctgg ttattggtgt ggtcctaggg agggcggaag gggaggcact
1620
gccatttga gacattccat ttcagatttg tcaaccagcg ataggccaca ttccagtaag
1680
aactcaatht gtctcccaaa tttgcagaaa caaacgtga tttaaaagct gagcttttta
1740
tcagaaagct tttttgatgt ttttaagtgt atgtgacttg ttgaactttt taaaaagtgc
1800
tacttttaaa atcccagata ctctgaatht tagaaaaaaa actaattctg attgtgtcgt
1860
gcccaagtac cttttttttt ttaatgaata gggaccaatg ccacattgct ttttatatht
1920

ctttcttttt taatgttgcc aaaacaaaa gtagcttgtg tttccttgtg attttgctac
1980
tttgagctat ttgtgtgtgt gggttttttt ccttaatttg aaagggacag cactgtgtat
2040
gtttataaac taaatgaaga taagatatta ttttgataaa acattcatct gagaacaatc
2100
aaagcagtag ccacatggtg ctggctcctt tgcagcacia acctgggtcat ttgatgact
2160
gtacaacagg aagacttgaa aaatcacgtg gattcatatt accaccgctc tcatttcctg
2220
gagtcctctg atcaaaaaag ctacacgtct atttcttctt ttcctttctc tttctagaa
2280
attgggtgtt tgtaccagaa tgggaatttg ctctcgtgtt atcctgtgct tcagatgatt
2340
ataatctaac ccaaactagc atgtgtttct gcagtttgtt acacacctag gatcatattg
2400
cattcatcac tttaaacatc atgtttcagg ttttggtaa tacttgacia ggggtgccag
2460
gacaggaaga cgtgtactgc tgagtgttcc ttcttgccct tttcagcagc ttgccagct
2520
cttgagtaca gtgggtggga ctaaaaatgt gggcatgtgg agaggggtat ttgccctggg
2580
tgatcctgtt tccctgtgct gtcccatgc tgtgttgag gaggaagtgg ctctccttcc
2640
accaacaaag ctctgtctc accctcttcc tcacatgtgc tgcgacctct ctccgggctc
2700
ccccagccat tcttcttttc ctctctgctt tttagctcta accacattaa gctaagacia
2760
ggccagaggg tgcgattgaa tgagtattga gactgaggag aatgatagag agtgaagcag
2820
aaacaggagc gcagacctct gctgtagctt taatgcatac aaacatgtcc ctccgcacia
2880
ctaacctgcc ctgctcttcc atctcgcacc aaggctgctg caaagcacag aggtccccg
2940
gactcggagg gggccagaga ctgagctctg gtcacctgtt cattcctcgg ttagctgaa
3000
ctttgccccg tttccagttt cttatagtgc atgcttggga aacaagattt aaggagcctc
3060
tgttttgaa gggctgtctg tgattgaacg tgaaatgtgt agtgccattg ggaccacgaa
3120
gggaattctt gcacatgctc gtgctggtgt gggcatggga ctggctggaa acgtctgtat
3180
gcagggagcc aggggtgagg cagagtgtgg tgacagccga acttgagta atgtccgtgt
3240
agaaaaagga ccatgttctt atccagccaa tactgggagt gctgtctcca caatttcagg
3300
gcatctgaat gtttgatgtg gttttgtgtg tgtgtatgta tgtgtttaat attgaagtgg
3360
atcatgagat gtaaagaaaa caataatggc aatgacttat attcaaatct gtatttgttt
3420
ctttatcaat gtaatctgct gaggacctt tgtctaagat tcagtagtgt ttaaggctc
3480
tgatatcgaa ttaatgaagt aaagtgttg atgggtgtga aacaccgtag ggcagtgtgt
3540

tcaaaagagaa gcaggagggc aagggaaagt taccctgac ttagtttgta gcttatgact
 3600
 tatttaaatga atggatgccc agccaagctc agagtaggcg cccaaagcat tgtggattat
 3660
 tttcctgttt tgtctttttt tttttttttt ttaagccatg acatcccaga agaggacagt
 3720
 gaattactcc taggtcggct cttatagagt ggccatagtg ttctgtcaaa acacttgctt
 3780
 ccattttcag agataaaaaat cattgattac aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
 3840
 aaaaaaaaaa aaa
 3853

<210> 6306

<211> 474

<212> PRT

<213> Homo sapiens

<400> 6306

Met	Arg	Arg	Val	Val	Arg	Gln	Ser	Lys	Phe	Arg	His	Val	Phe	Gly	Gln
1			5					10					15		
Pro	Val	Lys	Asn	Asp	Gln	Cys	Tyr	Glu	Asp	Ile	Arg	Val	Ser	Arg	Val
			20					25					30		
Thr	Trp	Asp	Ser	Thr	Phe	Cys	Ala	Val	Asn	Pro	Lys	Phe	Leu	Ala	Val
			35				40					45			
Ile	Val	Glu	Ala	Ser	Gly	Gly	Gly	Ala	Phe	Leu	Val	Leu	Pro	Leu	Ser
	50				55					60					
Lys	Thr	Gly	Arg	Ile	Asp	Lys	Ala	Tyr	Pro	Thr	Val	Cys	Gly	His	Thr
65				70					75					80	
Gly	Pro	Val	Leu	Asp	Ile	Asp	Trp	Cys	Pro	His	Asn	Asp	Gln	Val	Ile
			85					90					95		
Ala	Ser	Gly	Ser	Glu	Asp	Cys	Thr	Val	Met	Val	Trp	Gln	Ile	Pro	Glu
			100					105					110		
Asn	Gly	Leu	Thr	Ser	Pro	Leu	Thr	Glu	Pro	Val	Val	Val	Leu	Glu	Gly
			115				120						125		
His	Thr	Lys	Arg	Val	Gly	Ile	Ile	Ala	Trp	His	Pro	Thr	Ala	Arg	Asn
			130			135					140				
Val	Leu	Leu	Ser	Ala	Gly	Cys	Asp	Asn	Val	Val	Leu	Ile	Trp	Asn	Val
145				150					155					160	
Gly	Thr	Ala	Glu	Glu	Leu	Tyr	Arg	Leu	Asp	Ser	Leu	His	Pro	Asp	Leu
			165					170					175		
Ile	Tyr	Asn	Val	Ser	Trp	Asn	His	Asn	Gly	Ser	Leu	Phe	Cys	Ser	Ala
			180					185					190		
Cys	Lys	Asp	Lys	Ser	Val	Arg	Ile	Ile	Asp	Pro	Arg	Arg	Gly	Thr	Leu
			195				200					205			
Val	Ala	Glu	Arg	Glu	Lys	Ala	His	Glu	Gly	Ala	Arg	Pro	Met	Arg	Ala
			210			215					220				
Ile	Phe	Leu	Ala	Asp	Gly	Lys	Val	Phe	Thr	Thr	Gly	Phe	Ser	Arg	Met
225				230					235					240	
Ser	Glu	Arg	Gln	Leu	Ala	Leu	Trp	Asn	Pro	Lys	Asn	Met	Gln	Glu	Pro
			245					250					255		
Ile	Ala	Leu	His	Glu	Met	Asp	Thr	Ser	Asn	Gly	Val	Leu	Leu	Pro	Phe
			260				265					270			
Tyr	Asp	Pro	Asp	Thr	Ser	Ile	Ile	Tyr	Leu	Cys	Gly	Lys	Gly	Asp	Ser

275	280	285
Ser Ile Arg Tyr Phe Glu Ile Thr Asp Glu Ser Pro Tyr Val His Tyr		
290	295	300
Leu Asn Thr Phe Ser Ser Lys Glu Pro Gln Arg Gly Met Gly Tyr Met		
305	310	315
Pro Lys Arg Gly Leu Asp Val Asn Lys Cys Glu Ile Ala Arg Phe Phe		
	325	330
Lys Leu His Glu Arg Lys Cys Glu Pro Ile Ile Met Thr Val Pro Arg		
	340	345
Lys Ser Asp Leu Phe Gln Asp Asp Leu Tyr Pro Asp Thr Ala Gly Pro		
	355	360
Glu Ala Ala Leu Glu Ala Glu Glu Trp Phe Glu Gly Lys Asn Ala Asp		
	370	375
Pro Ile Leu Ile Ser Leu Lys His Gly Tyr Ile Pro Gly Lys Asn Arg		
385	390	395
Asp Leu Lys Val Val Lys Lys Asn Ile Leu Asp Ser Lys Pro Thr Ala		
	405	410
Asn Lys Lys Cys Asp Leu Ile Ser Ile Pro Lys Lys Thr Thr Asp Thr		
	420	425
Ala Ser Val Gln Asn Glu Ala Lys Leu Asp Glu Ile Leu Lys Glu Ile		
	435	440
Lys Ser Ile Lys Asp Thr Ile Cys Asn Gln Asp Glu Arg Ile Ser Lys		
	450	455
Leu Glu Gln Gln Met Ala Lys Ile Ala Ala		
465	470	

<210> 6307

<211> 2119

<212> DNA

<213> Homo sapiens

<400> 6307

```

nnctgggett ccttctacct gtgcggccct caacgtctcc ttggtgcggg acccgcttca
60
ctttcggttc cggaggtctc cctccactgc tcagacctct ggacctgaca ggagacgcct
120
acttggtctc gacgcggcgc ccagcccggt ctgtgtcccc ggcgccccgg accaccctcc
180
ctgccggctt tgggtgcgtt gtgggggtccc gaggattcgc gagatttggt gaaagacatt
240
caagattacg aagtttagat gacaaaaatg gatataccgag gtgctgtgga tgctgtgtgc
300
cccaccaata ttattgctgc caaggctgca gaagttcgtg caaacaagt caactggcaa
360
tcctatcttc agggacagat gatttctgct gaagattgtg agtttattca gaggtttgaa
420
atgaaacgaa gccctgaaga gaagcaagag atgcttcaaa ctgaaggcag ccagtgtgct
480
aaaacattta taaatctgat gactcatatc tgcaaagaac agaccgttca gtatatacta
540
actatggtgg atgatatgct gcaggaaaat catcagcgtg ttagcatttt ctttgactat
600
gcaagatgta gcaagaacac tgcgtggccc tactttctgc caatgttgaa tcgccaggat
660

```

cccttcactg ttcatatggc agcaagaatt attgccaaagt tagcagcttg gggaaaagaa
720
ctgatggaag gcagtgactt aaattactat ttcaattgga taaaaactca gctgagttca
780
cagaaaactgc gtggtagcgg tgttgctgtt gaaacaggaa cagtctcttc aagtgatagt
840
tcgcagtatg tgcagtgcgt ggccgggtgt ttgcagctga tgctccgggt caatgagtac
900
cgctttgctt ggggtggaagc agatggggta aattgcataa tgggagtggt gagtaacaag
960
tgtggctttc agctccagta tcaaatgatt ttttcaatat ggctcctggc attcagctct
1020
caaatgtgtg aacacctgcg gcgctataat atcattccag ttctgtctga tatccttcag
1080
gagtctgtca aagagaaaagt aacaagaatc attcttgtag catttcgtaa ctttttagaa
1140
aaatcaactg aaagagaaac tcgccaagaa tatgccctgg ctatgattca gtgcaaagtt
1200
ctgaaacagt tggagaactt ggaacagcag aagtacgatg atgaagatat cagcgaagat
1260
atcaaatttc ttttgaaaaa acttgagag agtgtccagg accttagttc atttgatgaa
1320
tacagttcag aacttaaact tgggaaggtg gaatggagtc ctgtgcacaa atctgagaaa
1380
ttttggagag agaatgctgt gaggttaa atgagaagaatt atgaactctt gaaaatcttg
1440
acaaaacttt tgggaagtgc agatgatccc caagtcttag ctgttgctgc tcacgatgtt
1500
ggagaatatg tgcggcatta tccacgaggc aaacgggtca tcgagcagct cgggtgggaag
1560
cagctggtca tgaaccacat gcatcatgaa gaccagcagg tccgctataa tgctctgctg
1620
gccgtgcaga agctcatggt gcacaactgg gaataccttg gcaagcagct ccagtcagag
1680
cagccccaga ccgctgcgcg ccgaagctaa gcctgcctct ggccttcccc tccgctcaa
1740
tgcaagaacca gtagtgggag cactgtgttt agagttaaga gtgaacactg tttgatttta
1800
cttggaattt cctctgttat atagcttttc ccaatgctaa tttccaaaca acaacaaca
1860
aataacatgt ttgctgtta agttgtataa aagtaggtga ttctgtattt aaagaaaata
1920
ttactgttac atatactgct tgcaatttct gtatttattg ttctctggaa ataaatatag
1980
ttattaaagg atttctactc caaacatggc ctctctcttt acttggaact tgaacaaaag
2040
tcaactgttg tctcttttca aaccaaattg ggagaattgt tgcaaagtag tgaatggcaa
2100
ataaatgttt taaaatcta
2119

<210> 6308

<211> 483

<212> PRT

<213> Homo sapiens

<400> 6308

```

Met Thr Lys Met Asp Ile Arg Gly Ala Val Asp Ala Ala Val Pro Thr
 1           5           10           15
Asn Ile Ile Ala Ala Lys Ala Ala Glu Val Arg Ala Asn Lys Val Asn
 20           25           30
Trp Gln Ser Tyr Leu Gln Gly Gln Met Ile Ser Ala Glu Asp Cys Glu
 35           40           45
Phe Ile Gln Arg Phe Glu Met Lys Arg Ser Pro Glu Lys Gln Glu
 50           55           60
Met Leu Gln Thr Glu Gly Ser Gln Cys Ala Lys Thr Phe Ile Asn Leu
 65           70           75           80
Met Thr His Ile Cys Lys Glu Gln Thr Val Gln Tyr Ile Leu Thr Met
 85           90           95
Val Asp Asp Met Leu Gln Glu Asn His Gln Arg Val Ser Ile Phe Phe
100           105           110
Asp Tyr Ala Arg Cys Ser Lys Asn Thr Ala Trp Pro Tyr Phe Leu Pro
115           120           125
Met Leu Asn Arg Gln Asp Pro Phe Thr Val His Met Ala Ala Arg Ile
130           135           140
Ile Ala Lys Leu Ala Ala Trp Gly Lys Glu Leu Met Glu Gly Ser Asp
145           150           155           160
Leu Asn Tyr Tyr Phe Asn Trp Ile Lys Thr Gln Leu Ser Ser Gln Lys
165           170           175
Leu Arg Gly Ser Gly Val Ala Val Glu Thr Gly Thr Val Ser Ser Ser
180           185           190
Asp Ser Ser Gln Tyr Val Gln Cys Val Ala Gly Cys Leu Gln Leu Met
195           200           205
Leu Arg Val Asn Glu Tyr Arg Phe Ala Trp Val Glu Ala Asp Gly Val
210           215           220
Asn Cys Ile Met Gly Val Leu Ser Asn Lys Cys Gly Phe Gln Leu Gln
225           230           235           240
Tyr Gln Met Ile Phe Ser Ile Trp Leu Leu Ala Phe Ser Pro Gln Met
245           250           255
Cys Glu His Leu Arg Arg Tyr Asn Ile Ile Pro Val Leu Ser Asp Ile
260           265           270
Leu Gln Glu Ser Val Lys Glu Lys Val Thr Arg Ile Ile Leu Ala Ala
275           280           285
Phe Arg Asn Phe Leu Glu Lys Ser Thr Glu Arg Glu Thr Arg Gln Glu
290           295           300
Tyr Ala Leu Ala Met Ile Gln Cys Lys Val Leu Lys Gln Leu Glu Asn
305           310           315           320
Leu Glu Gln Gln Lys Tyr Asp Asp Glu Asp Ile Ser Glu Asp Ile Lys
325           330           335
Phe Leu Leu Glu Lys Leu Gly Glu Ser Val Gln Asp Leu Ser Ser Phe
340           345           350
Asp Glu Tyr Ser Ser Glu Leu Lys Ser Gly Arg Leu Glu Trp Ser Pro
355           360           365
Val His Lys Ser Glu Lys Phe Trp Arg Glu Asn Ala Val Arg Leu Asn
370           375           380
Glu Lys Asn Tyr Glu Leu Leu Lys Ile Leu Thr Lys Leu Leu Glu Val
385           390           395           400
Ser Asp Asp Pro Gln Val Leu Ala Val Ala Ala His Asp Val Gly Glu

```



```

                405                410                415
Tyr Val Arg His Tyr Pro Arg Gly Lys Arg Val Ile Glu Gln Leu Gly
                420                425                430
Gly Lys Gln Leu Val Met Asn His Met His His Glu Asp Gln Gln Val
                435                440                445
Arg Tyr Asn Ala Leu Leu Ala Val Gln Lys Leu Met Val His Asn Trp
                450                455                460
Glu Tyr Leu Gly Lys Gln Leu Gln Ser Glu Gln Pro Gln Thr Ala Ala
465                470                475                480
Ala Arg Ser

```

<210> 6309

<211> 564

<212> DNA

<213> Homo sapiens

<400> 6309

```

cggccgcagc gttcacggtg acatcgcaaa aggcgagggg gagacgcgcc cgcgggaccc
60
cttcccgggtg tgctcccacg tggcgctcgac cgggaagaag gggccggtag ggagcccttc
120
ccaggcgccct cccacggggt tccccgcag ccgcgacacc accaacagtc gccgcaaccg
180
ccgcgtggaa cagacgaccc ggggtctcaaa gaggcggcgc gggcgggacg cagcccttgg
240
tccatctcgg gcgcgcctg atgcactcct actgcgcccg ggtcctcccg gcctgtctca
300
ctttgggggg ctcagggttc tcacggggga cgctgcacg taagccagga cggcgttctg
360
caggaagctc gccctctggg cctcctcgtc ccggatgcgg gcgatctccg cctcccggag
420
ccgcagcttc tcccggagag acgcgttctc gctctccctg tccagcagcg cgatctgagc
480
tcactggaac ctccacctcc cagggttcgag tgattctcct gcctcagcct cctgagtagc
540
tggtattaca gggtgccacc acta
564

```

<210> 6310

<211> 83

<212> PRT

<213> Homo sapiens

<400> 6310

```

Cys Thr Pro Thr Ala Pro Gly Ser Ser Arg Pro Val Ser Leu Trp Gly
  1                5                10                15
Ala Gln Gly Pro His Gly Gly Arg Leu His Val Ser Gln Asp Gly Val
                20                25                30
Leu Gln Glu Ala Arg Pro Leu Gly Leu Leu Val Pro Asp Ala Gly Asp
                35                40                45
Leu Arg Leu Pro Glu Pro Gln Leu Leu Pro Glu Arg Arg Val Leu Ala
                50                55                60
Leu Pro Val Gln Gln Arg Asp Leu Ser Ser Leu Glu Pro Pro Pro Pro

```

65
Arg Phe Glu

70

75

80

<210> 6311
<211> 1548
<212> DNA
<213> Homo sapiens

<400> 6311
nngtcttgga agagaccaac ctcagctcag actttccatc tgagcacagc cgtttggtta
60
tgagcttttt actgaatttt atagcaactc tgatttcttc ctttaaataa ttggaggctt
120
tttaaagatc ttatggggct caaataactaa cttcataaat ggcccttttg ataacagcag
180
caaataatct ctcagctgat atttcaattt actaagggaag cacaaattaa aacattcctg
240
ctacacagtc atgggctggc acatgtctgg ttggatgaat acaaggagca gtatttttcc
300
ttaagacctg acctgaagac gaaaagctat ggcaatatca gtgagcgtgt ggaactgaga
360
aagaagtgg gctgtaaact attttaaattg tatttgata atgtataccc agagatgcag
420
atatctgggt cccacgcaa accccaacaa cccatttttg tcaatagagg gccaaaacga
480
cccaaagtcc ttcaacgtgg aaggctctat cacctccaga ccaacaaatg cctggtggcc
540
cagggcgcc caagtcagaa gggaggtctc gtggtgctta aggcctgtga ctacagtgc
600
ccaaatcaga tctggatcta taatgaagag catgaattgg ttttaaataa tctcctttgt
660
ctagatatgt cagagactcg ctcacagac ccgccacggc tcatgaaatg ccacgggtga
720
ggaggatccc agcagtgga ctttgggaaa aacaatcggc tataaccaggt gtcggttga
780
cagtgctga gagcagtga tcccctgggt cagaagggt ctgtcgccat ggcatctgc
840
gatggctcct cttcacagca gtggcatttg gaaggtaaag gtggatgctg tggcgggaac
900
gttgcctcat caggcgtgc ctcgggtgtg gagtttgggg ctttaggaaa gcctgggttg
960
ggtggagcag aaccatcttg gagaagatga cagttccctg tcctcccga gatgctggg
1020
tgtgttagca gaggtgacac gtgtctgaca gagacgggag ctctgagtgt ccacgggtga
1080
agaagtgagt gtccacgggt gaagaagtga gtatgtttca cctggacatt aaggatgat
1140
ttgagctgct gttaaggaat ttcttctta tagaggcaaa ccacagtatc attttaactc
1200
tagaattggg ctgtacaga aggataaaac ccaggaaaat ggatatttct attcagattt
1260
atttatgcct ctttttaact ccttttaatt atgcagtgg ttttatctga tcagggaactt
1320

gtcatgattt cctttcttag acttcatagg agatagtgtt ttaaaaaaaaa aaaaacttct
 1380
 attatttggt tagtatgttg taagtagatc attttaaaaa actgaatcta tattatgttt
 1440
 aacttcagaa ggcatcattt ataagacagt atggcagtta attataaaat tattttgatg
 1500
 aattatgata caatctacat aataaagaat ccttttgatt aaaaaaaaa
 1548

<210> 6312

<211> 234

<212> PRT

<213> Homo sapiens

<400> 6312

Gln	Gln	Gln	Ile	Ile	Ser	Gln	Leu	Ile	Phe	Gln	Phe	Thr	Lys	Glu	Ala
1				5					10					15	
Gln	Ile	Lys	Thr	Phe	Leu	Leu	His	Ser	His	Gly	Leu	Ala	His	Val	Trp
			20					25						30	
Leu	Asp	Glu	Tyr	Lys	Glu	Gln	Tyr	Phe	Ser	Leu	Arg	Pro	Asp	Leu	Lys
		35					40					45			
Thr	Lys	Ser	Tyr	Gly	Asn	Ile	Ser	Glu	Arg	Val	Glu	Leu	Arg	Lys	Lys
	50					55					60				
Leu	Gly	Cys	Lys	Ser	Phe	Lys	Trp	Tyr	Leu	Asp	Asn	Val	Tyr	Pro	Glu
65					70					75				80	
Met	Gln	Ile	Ser	Gly	Ser	His	Ala	Lys	Pro	Gln	Gln	Pro	Ile	Phe	Val
			85						90					95	
Asn	Arg	Gly	Pro	Lys	Arg	Pro	Lys	Val	Leu	Gln	Arg	Gly	Arg	Leu	Tyr
			100					105						110	
His	Leu	Gln	Thr	Asn	Lys	Cys	Leu	Val	Ala	Gln	Gly	Arg	Pro	Ser	Gln
			115					120				125			
Lys	Gly	Gly	Leu	Val	Val	Leu	Lys	Ala	Cys	Asp	Tyr	Ser	Asp	Pro	Asn
	130					135					140				
Gln	Ile	Trp	Ile	Tyr	Asn	Glu	Glu	His	Glu	Leu	Val	Leu	Asn	Ser	Leu
145					150					155				160	
Leu	Cys	Leu	Asp	Met	Ser	Glu	Thr	Arg	Ser	Ser	Asp	Pro	Pro	Arg	Leu
			165						170					175	
Met	Lys	Cys	His	Gly	Ser	Gly	Gly	Ser	Gln	Gln	Trp	Thr	Phe	Gly	Lys
			180					185					190		
Asn	Asn	Arg	Leu	Tyr	Gln	Val	Ser	Val	Gly	Gln	Cys	Leu	Arg	Ala	Val
			195					200				205			
Asp	Pro	Leu	Gly	Gln	Lys	Gly	Ser	Val	Ala	Met	Ala	Ile	Cys	Asp	Gly
	210					215					220				
Ser	Ser	Ser	Gln	Gln	Trp	His	Leu	Glu	Gly						
225					230										

<210> 6313

<211> 725

<212> DNA

<213> Homo sapiens

<400> 6313

tttttttttt tttttttttt tttttttttg gtaattaaca taatttatta cgcaaaaaat
 60

gagaaaatat acagcaggag ggatgaggag tacacatagg aaatttctgt gattttcttc
 120
 attttgatcg tattgctttc ttgtcttcag gaggaagat ttcgacttca aaagtaacaa
 180
 aatatttaag aagagaattc acatctttct gttctagctg gtattcttgc attattttct
 240
 cagcagtcca ggtttctggg aaaagcttat gattattgag aagtgtcaat gcttctacaa
 300
 tggaaaattht gcctttggga atgctcttaa tatttatcat atcaaaatga tggctttctg
 360
 gcaatctgaa ttccttcggc tcttgacatg tttcagcagc ttttacctgc aaggaagaca
 420
 caggatcttt ggaatcaaca tacacatctt ttagaaacga cagcagcttt tcctctttac
 480
 gagcaatctc tcctttaact tctggataga gactaatctg ctctcgcagg aggctgttgg
 540
 tagaggggtg tctgggagcg acagagggct tcctcttgct gatttcccgt tccgctcggt
 600
 tctctagggt gaaattcctg ataccgcgaa tcactagtgc tcccatctcc tcataacatt
 660
 atgcgctcag gttcaggccg cactgtggaa caccggcgca ggacaactct cgggacaccc
 720
 ggagc
 725

<210> 6314

<211> 175

<212> PRT

<213> Homo sapiens

<400> 6314

Met	Gly	Ala	Leu	Val	Ile	Arg	Gly	Ile	Arg	Asn	Phe	Asn	Leu	Glu	Asn
1				5					10					15	
Arg	Ala	Glu	Arg	Glu	Ile	Ser	Lys	Met	Lys	Pro	Ser	Val	Ala	Pro	Arg
			20					25					30		
His	Pro	Ser	Thr	Asn	Ser	Leu	Leu	Arg	Glu	Gln	Ile	Ser	Leu	Tyr	Pro
		35				40						45			
Glu	Val	Lys	Gly	Glu	Ile	Ala	Arg	Lys	Asp	Glu	Lys	Leu	Leu	Ser	Phe
	50				55					60					
Leu	Lys	Asp	Val	Tyr	Val	Asp	Ser	Lys	Asp	Pro	Val	Ser	Ser	Leu	Gln
65				70					75					80	
Val	Lys	Ala	Ala	Glu	Thr	Cys	Gln	Glu	Pro	Lys	Glu	Phe	Arg	Leu	Pro
			85					90					95		
Lys	Asp	His	His	Phe	Asp	Met	Ile	Asn	Ile	Lys	Ser	Ile	Pro	Lys	Gly
		100				105						110			
Lys	Ile	Ser	Ile	Val	Glu	Ala	Leu	Thr	Leu	Leu	Asn	Asn	His	Lys	Leu
	115					120					125				
Phe	Pro	Glu	Thr	Trp	Thr	Ala	Glu	Lys	Ile	Met	Gln	Glu	Tyr	Gln	Leu
	130				135					140					
Glu	Gln	Lys	Asp	Val	Asn	Ser	Leu	Leu	Lys	Tyr	Phe	Val	Thr	Phe	Glu
145				150					155					160	
Val	Glu	Ile	Phe	Pro	Pro	Glu	Asp	Lys	Lys	Ala	Ile	Arg	Ser	Lys	
			165					170						175	

<210> 6315
 <211> 378
 <212> DNA
 <213> Homo sapiens

<400> 6315
 caagaatcca ttgaagccag caagactgca ctttgtcctg aaagatttgt acccctaagt
 60
 gctcaaaaaca gaaaacttgt ggaggccata aaacaaggtc acattcctga gctccaggag
 120
 tatgtaaaat ataatatgc aatggatgaa gctgatgaaa aaggatgggt tccattgcat
 180
 gaagctgttg ttcaacccat tcaacaaata cttgagattg ttctggatgc atcctataag
 240
 acactctggg aattcaagac ctgtgatgga gaaacaccct tgactttggc agtcaaagct
 300
 ggtctggtgg aaaatgtaag aactttatta gaaaaggagg tgtggcccaa cacaaaaaat
 360
 gataaaggag agaccccc
 378

<210> 6316
 <211> 126
 <212> PRT
 <213> Homo sapiens

<400> 6316
 Gln Glu Ser Ile Glu Ala Ser Lys Thr Ala Leu Cys Pro Glu Arg Phe
 1 5 10 15
 Val Pro Leu Ser Ala Gln Asn Arg Lys Leu Val Glu Ala Ile Lys Gln
 20 25 30
 Gly His Ile Pro Glu Leu Gln Glu Tyr Val Lys Tyr Lys Tyr Ala Met
 35 40 45
 Asp Glu Ala Asp Glu Lys Gly Trp Phe Pro Leu His Glu Ala Val Val
 50 55 60
 Gln Pro Ile Gln Gln Ile Leu Glu Ile Val Leu Asp Ala Ser Tyr Lys
 65 70 75 80
 Thr Leu Trp Glu Phe Lys Thr Cys Asp Gly Glu Thr Pro Leu Thr Leu
 85 90 95
 Ala Val Lys Ala Gly Leu Val Glu Asn Val Arg Thr Leu Leu Glu Lys
 100 105 110
 Gly Val Trp Pro Asn Thr Lys Asn Asp Lys Gly Glu Thr Pro
 115 120 125

<210> 6317
 <211> 1201
 <212> DNA
 <213> Homo sapiens

<400> 6317
 nngggccag aactacaact ctgcagcgaa agatagagat gcccttgaaa atgtgtcaca
 60
 ttcttaagat gtcttgccga agtagcaaga gcggagggtg actgtgtgag caggagcgag
 120

agggcgccag ctctcgagg ggaggttctt actgcgcgcc ccacctgtg caagaatgtc
 180
 aggccttagg gcagctgcca taggccccag gggcatcagg actctgctc tgaaccagag
 240
 ctgctttccc gactaacttc aatctggaga gatggttaagt tatctaaccg gctcttcttt
 300
 tggcgagact gctctttctc cttaatcaga gcccccatg ccctttgcag ctgagagtcg
 360
 tcttctcag cgccaggcac cctgtgatcc actttcttcg tattcttttc tttggtcttg
 420
 ggtgcagttc ctaggcgagt ccataaatta cctgatttct tctcccgagt atcggcgtag
 480
 aggcctttac tatctgcct gggaacacct agcctactat gcacatcaga agagggctct
 540
 ctccgaacga cggggttact actaaaagcc ttttcggag aatgtggtct ttttcctaac
 600
 cgctggcgta tatctgattt agtactgtg actggtggcc gtggacggga gtgctgacgt
 660
 ttctcatcta atagatgtcg gacatctgca aatttctcag gtggttaattt gttaccaatt
 720
 cggtttttga tattgcttga agatacacta tctgccctca tggagttcct aatatttttc
 780
 aactgagatt ccacttcgtc agcatacata gtcattttca tgcttttctt tgggaaggc
 840
 gtggaaatca ttttcagttc tagatcatag tccatttcat ctgagttctga gctgctggca
 900
 ctggatcgtc tagacgcgt ccgctcccgg ggctgcttga gagccgggag ctctcgtgg
 960
 tactctacca ccactctgtc atctgcatcc atgtcctggt cttcttcttc ctcttctct
 1020
 tctctctct cctctcttc cctctcttca atgggttctt cgggaacatt cactagccca
 1080
 gaatgtcgat gttatacga cgtaagcca acgtcatccc caatcagggc tctcttcttg
 1140
 atcacgtccc gctgaatacg acgggaatga tatcttcgct tccatgaatt gctaagaatt
 1200
 c
 1201

<210> 6318

<211> 94

<212> PRT

<213> Homo sapiens

<400> 6318

Ser Ile Ser Ser Glu Ser Glu Leu Leu Ala Leu Asp Arg Leu Asp Ala
 1 5 10 15
 Leu Arg Ser Arg Gly Cys Leu Arg Ala Gly Ser Ser Ser Trp Tyr Ser
 20 25 30
 Thr Thr Thr Leu Ser Ser Ala Ser Met Ser Trp Ser Ser Ser Ser
 35 40 45
 Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Met Gly Ser Ser
 50 55 60
 Gly Thr Phe Thr Ser Pro Glu Cys Arg Cys Leu Tyr Asp Val Lys Pro

65 70 75 80
Thr Ser Ser Pro Ile Arg Ala Leu Phe Leu Ile Thr Ser Arg
 85 90

```
<210> 6319
<211> 345
<212> DNA
<213> Homo sapiens
```

```
<400> 6319
ggcgcgcgcgc tgtggggcgc ctccgcagcc ggcacactgg acgtggtgcg gagcctgctg
60
cgccgcgggg cctcggtgaa cgcaccacg cgcaccaact ccacgcctct ccgcgcgcgc
120
tgcttcgacg gccacctgga ggtggtgcgc tacctggtcg gcgagacca ggcgcacctg
180
gaggtggcca accggcacgg ccacacgtgc ctcatgatct cgtgctacaa gggccaccgt
240
gagatcgccc gctacctgct ggagcagggc gcccaggtga accggcgcag cgccaagggc
300
aacacggccc tgcatgactg cgccgagtcc ggcagcctgg agatc
345
```

```
<210> 6320
<211> 115
<212> PRT
<213> Homo sapiens
```

```

<400> 6320
Ala Pro Pro Leu Trp Ala Ala Ser Ala Ala Gly His Leu Asp Val Val
 1          5          10          15
Arg Ser Leu Leu Arg Arg Gly Ala Ser Val Asn Arg Thr Thr Arg Thr
          20          25          30
Asn Ser Thr Pro Leu Arg Ala Ala Cys Phe Asp Gly His Leu Glu Val
          35          40          45
Val Arg Tyr Leu Val Gly Glu His Gln Ala Asp Leu Glu Val Ala Asn
          50          55          60
Arg His Gly His Thr Cys Leu Met Ile Ser Cys Tyr Lys Gly His Arg
65          70          75          80
Glu Ile Ala Arg Tyr Leu Leu Glu Gln Gly Ala Gln Val Asn Arg Arg
          85          90          95
Ser Ala Lys Gly Asn Thr Ala Leu His Asp Cys Ala Glu Ser Gly Ser
          100          105          110
Leu Glu Ile
          115

```

```
<210> 6321
<211> 1442
<212> DNA
<213> Homo sapiens
```

<400> 6321
aagctttgcc agagtgggtt ggctacagtc agctcttcta caggaagtgg cattttccac
60

```

ttgtgaaacg gtaggtcatt cctgcctca tgcagaactc agccctgtgg agctccacca
120
cctggcccag gccctgccc catgcaacct cccgggggtgg cctcaatga cctgcacgtc
180
ccttcactct aaggaacct gagttacagt ggccttaagg acatgtgtat ttagaagcct
240
ttgtgtacaa actagctctg tgcgctctca gtttaccgtc ctcacacttt attgttagct
300
gttctttaag tttctcacac attattggca attatgtaaa aatcaagaac ctctataaaa
360
caacctggct ttccagggtg aattccgcat acagccaaaa ctggattcca gtgtggccag
420
acaacgccc tgteccaatt taagagtcgc tgcctcacc accatccgga gtggcctctc
480
tgtagtggtg tgatgtggcc agggcagtgt ccacctgaac ttcctcctca tggactgaa
540
caacggggga cccccaccc tcaatgatgt cccgggtggc cgagtgggtg cagggtggag
600
aagaagaagg tggtctggct cttaattctg agggatttgg aacctggagg gtaatctcat
660
tctgacaggt actggattca ggccttaagg cgggggacag cacagtgttc tcttctctc
720
cagagttcag gaagacgtcc agggcctcct ggtccgatat gtccatcagg tccatctgct
780
ccagcatgtc cagttcact tccatggatg acatgctgcc tatgggtctc cgcgctctg
840
caatctgcag gtatccagtg gacaggtact gctgctccat gtctgctgg aaggcttctc
900
caaaaaactt ctgccgtcc ttcagcttca ttgctgggt gtgctccatt tccaggacct
960
tctggcggtg ctctgcatct agttcagagg gatccctctg actattttcg gtgagtcctg
1020
gagatgacat gtagtgaga cctgaatgag tgaacagaag ctgagtgtg gtcaagtga
1080
gcctccagtt accaggcagc tgccctcacg tgcattctct gggatgtaga acaaaggaag
1140
tgaggctgaa gccagaagca gggttttcca aagaaattgt agtaagccta ttagttttt
1200
gctgatggct taagcagata tacattggaa tctactgcct ctataaaagc aaaatgcaag
1260
ctctcagggg ctctagtgtg caaagatgta tgcaccggtc tgggaccata ccaaatgcag
1320
ctcaaatgg aggggaggga aggctgaaaa taactaaatc caacagaatt tgtcatctag
1380
gtacaaagat gctttagtaa cacagcaaaa gagagatgaa atcttgctgt ttgaaagtag
1440
ta
1442

```

<210> 6322

<211> 196

<212> PRT

<213> Homo sapiens

<400> 6322

```

Met Ser Ser Pro Gly Leu Thr Glu Asn Ser Gln Arg Asp Pro Ser Glu
 1           5           10           15
Leu Asp Ala Glu His Ala Gln Lys Val Leu Glu Met Glu His Thr Gln
      20           25           30
Gln Met Lys Leu Lys Glu Arg Gln Lys Phe Phe Glu Glu Ala Phe Gln
      35           40           45
Gln Asp Met Glu Gln Gln Tyr Leu Ser Thr Gly Tyr Leu Gln Ile Ala
      50           55           60
Glu Arg Arg Glu Pro Ile Gly Ser Met Ser Ser Met Glu Val Asn Val
      65           70           75           80
Asp Met Leu Glu Gln Met Asp Leu Met Asp Ile Ser Asp Gln Glu Ala
      85           90           95
Leu Asp Val Phe Leu Asn Ser Gly Gly Glu Glu Asn Thr Val Leu Ser
      100          105          110
Pro Ala Leu Gly Pro Glu Ser Ser Thr Cys Gln Asn Glu Ile Thr Leu
      115          120          125
Gln Val Pro Asn Pro Ser Glu Leu Arg Ala Lys Pro Pro Ser Ser Ser
      130          135          140
Ser Thr Cys Thr Asp Ser Ala Thr Arg Asp Ile Ser Glu Gly Gly Glu
      145          150          155          160
Ser Pro Val Val Gln Ser Asp Glu Glu Glu Val Gln Val Asp Thr Ala
      165          170          175
Leu Ala Thr Ser His Thr Asp Arg Glu Ala Thr Pro Asp Gly Gly Glu
      180          185          190
Asp Ser Asp Ser
      195

```

What is claimed is:

1. An isolated nucleic acid molecule encoding a polypeptide comprising an amino acid sequence that is at least 85% identical to a polypeptide including an amino acid sequence selected from the group consisting of SEQ ID NO:2 n , wherein n is any integer 1-3161, or the complement thereof.
2. The isolated nucleic acid molecule of claim 1, said molecule hybridizing under stringent conditions to a nucleic acid sequence complementary to a nucleic acid molecule comprising the sequence of nucleotides selected from the group consisting of SEQ ID NO:2 n , wherein n is any integer 1-3161, or the complement thereof.
3. The isolated nucleic acid molecule of claim 1, said molecule encoding a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO: 2 n , wherein n is any integer 1-3161, or an amino acid sequence comprising one or more conservative substitutions in the amino acid sequence selected from the group consisting of SEQ ID NO: 2 n .
4. The isolated nucleic acid molecule of claim 1, wherein said molecule encodes a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO: 2 n , wherein n is any integer 1-3161.
5. The isolated nucleic acid molecule of claim 1, wherein said molecule comprises the sequence of nucleotides selected from the group consisting of SEQ ID NO:2 n -1, wherein n is any integer 1-3161, or the complement thereof.
6. An oligonucleotide less than 100 nucleotides in length and comprising at least 10 contiguous nucleotides selected from the group consisting of SEQ ID NO:2 n -1, wherein n is any integer 1-3161, or the complement thereof.
7. A vector comprising the nucleic acid molecule of claim 1.

8. The vector of claim 7, wherein said vector is an expression vector.
9. A host cell comprising the isolated nucleic acid molecule of claim 1.
10. A substantially purified polypeptide comprising an amino acid sequence at least 80% identical to a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO: 2*n*, wherein *n* is any integer 1-3161.
11. The polypeptide of claim 10, wherein said polypeptide comprises the amino acid sequence selected from the group consisting of SEQ ID NO: 2*n*, wherein *n* is any integer 1-3161.
12. An antibody that selectively binds to the polypeptide of claim 10.
13. A pharmaceutical composition comprising a therapeutically or prophylactically effective amount of a therapeutic selected from the group consisting of:
 - a) the nucleic acid of claim 1;
 - b) the polypeptide of claim 10; and
 - c) the antibody of claim 12;and a pharmaceutically acceptable carrier.
14. A kit comprising in one or more containers, a therapeutically or prophylactically effective amount of the pharmaceutical composition of claim 13.
15. A method of producing the polypeptide of claim 10, said method comprising culturing the host cell of claim 9 under conditions in which the nucleic acid molecule is expressed.
16. A method of detecting the presence of the polypeptide of claim 10 in a sample, comprising contacting the sample with a compound that selectively binds to said polypeptide under conditions allowing the formation of a complex between said polypeptide and said

compound, and detecting said complex, if present, thereby identifying said polypeptide in said sample.

17. A method of detecting the presence of a nucleic acid molecule of claim 1 in a sample, the method comprising contacting the sample with a nucleic acid probe or primer that selectively binds to the nucleic acid molecule and determining whether the nucleic acid probe or primer bound to the nucleic acid molecule of claim 1 is present in the sample.

18. A method for modulating the activity of the polypeptide of claim 10, the method comprising contacting a cell sample comprising the polypeptide of claim 10 with a compound that binds to said polypeptide in an amount sufficient to modulate the activity of the polypeptide.

19. The use of a therapeutic in the manufacture of a medicament for treating a syndrome associated with a ORFX-associated disorder, wherein said therapeutic is selected from the group consisting of:

- a) the nucleic acid of claim 1;
- b) the polypeptide of claim 10; and
- c) the antibody of claim 12.

20. A method for screening for a modulator of activity or of latency or predisposition to an ORFX-associated disorder, said method comprising:

- a) contacting a test compound with the polypeptide of claim 10; and
- b) determining if said test compound binds to said polypeptide,

wherein binding of said test compound to said polypeptide indicates the test compound is a modulator of activity or of latency or predisposition to an ORFX-associated disorder.

21. A method for screening for a modulator of activity or of latency or predisposition to an ORFX-associated disorder, said method comprising:

- a) administering a test compound to a test subject at an increased risk ORFX-associated disorder, wherein said test subject recombinantly expresses a polypeptide encoded by the nucleotide of claim 1;

- b) measuring expression the activity of said protein in said test subject;
- c) measuring the activity of said protein in a control subject that recombinantly expresses said protein and is not at increased risk for an ORFX-associated disorder; and
- d) comparing expression of said protein in said test subject and said control subject, wherein a change in the activity of said protein in said test subject relative to said control subject indicates the test compound is a modulator or of latency of predisposition to an ORFX-associated disorder.

22. The method of claim 20, wherein said test animal is a recombinant test animal that expresses a test protein transgene or expresses said transgene under the control of a promoter at an increased level relative to a wild-type test animal, and wherein said promoter is not the native gene promoter of said transgene.

23. A method for determining the presence of or predisposition to a disease associated with altered levels of a polypeptide of claim 11 in a subject, the method comprising:

- a) measuring the amount of the polypeptide in a sample from said subject; and
- b) comparing the amount of said polypeptide in step (a) to the amount of the polypeptide present in a control sample,

wherein an alteration in the level of the polypeptide in step (a) as compared to the control sample indicates the presence of or predisposition to a disease in said subject.

24. The method of claim 23, wherein said subject is a human.

25. A method for determining the presence of or predisposition to a disease associated with altered levels the nucleic acid molecule of claim 1 in a subject, the method comprising:

- a) measuring the amount of the nucleic acid in a sample from the mammalian subject; and
- b) comparing the amount of said nucleic acid in step (a) to the amount of the nucleic acid present in a control sample,

wherein an alteration in the level of the nucleic acid in step (a) as compared to the control sample indicates the presence of or predisposition to said disease in said subject.

26. The method of claim 25, wherein said subject is a human.
27. A method of treating or preventing a pathological condition associated with an ORFX-associated disorder in a subject, the method comprising administering to said subject polypeptide of claim 10 in an amount sufficient to alleviate or prevent said pathological condition.
28. The method of claim 27, wherein said subject is a human.
29. A method of treating or preventing a pathological condition associated with an ORFX-associated disorder in a subject, the method comprising administering to said subject nucleic acid molecule of claim 1 in an amount sufficient to alleviate or prevent said pathological condition.
30. The method of claim 29, wherein said subject is a human.
31. A method of treating or preventing a pathological condition associated with an ORFX-associated disorder in a subject, the method comprising administering to said subject antibody of claim 12 in an amount sufficient to alleviate or prevent said pathological condition.
32. The method of claim 31, wherein said subject is a human.